UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

GROUND-WATER DATA FOR GEORGIA, 1984

By J. S. Clarke, S. A. Longsworth, K. W. McFadden, and M. F. Peck

---

Open-File Report 85-331

Prepared in cooperation with the
GEORGIA DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL PROTECTION DIVISION
GEORGIA GEOLOGIC SURVEY

Doraville, Georgia
1985

UNITED STATES DEPARTMENT OF THE INTERIOR

DONALD PAUL HODEL, Secretary

GEOLOGICAL SURVEY

Dallas L. Peck, Director

best copy
available

For additional information
write to:

District Chief
U.S. Geological Survey
Suite B
6481 Peachtree Industrial Boulevard
Doraville, Georgia 30360

Copies of this report can
be purchased from:

Open-File Services Section
Western Distribution Center
U.S. Geological Survey
Box 25425, Federal Center
Denver, Colorado 80225
(Telephone: (303) 234-5888)

PREFACE

Data used in this report were collected by the U.S. Geological Survey in cooperation with the State of Georgia; Chatham County; Glynn County; the cities of Brunswick and Valdosta; and the Albany Water, Gas, and Light Commission.

Records of all water-level measurements and water-quality data used in this report may be obtained upon request from the U.S. Geological Survey, Water Resources Division, 6481 Peachtree Industrial Boulevard, Suite B, Doraville, GA 30360.

FACTORS FOR CONVERTING INCH-POUND UNITS TO INTERNATIONAL SYSTEM (SI) UNITS

Multiply inch-pound units	by	To obtain SI units
foot (ft)	0.3048	meter (m)
mile (mi)	1.609	kilometer (km)
gallon per minute (gal/min) (gpm)	0.06309	liter per second (L/s)
million gallons per day (Mgal/d)	0.04381	cubic meter per second (m^3/s)
	43.81	liters per second (L/s)

CONTENTS

		Page
	ABSTRACT	1
1.0	INTRODUCTION	2
	1.1 Major aquifers	4
2.0	GROUND-WATER LEVELS	6
	2.1 Paleozoic rock aquifers	8
	2.2 Crystalline rock aquifers	12
	2.3 Water-table aquifers	16
	2.4 Cretaceous aquifer system	24
	2.4.1 Providence aquifer	34
	2.5 Clayton aquifer	38
	2.6 Claiborne aquifer	48
	2.7 Floridan aquifer system	56
	2.7.1 Southwest area	58
	2.7.2 South-central area	74
	2.7.3 East-central area	86
	2.7.4 Coastal area	94
	2.7.4.1 Savannah area	96
	2.7.4.2 Jesup-Riceboro area	106
	2.7.4.3 Brunswick area	120
	2.7.4.4 Kings Bay-Okefenokee Swamp area	130
3.0	GROUND-WATER QUALITY	136
	3.1 Savannah area	136
	3.2 Brunswick area	140
4.0	SELECTED REFERENCES	146

LIST OF ILLUSTRATIONS

Page

Figure 1.1-1. Map showing areas of utilization of major aquifers and block diagram showing major aquifers and physiographic provinces of Georgia..... 5

2.0-1. Map showing locations of observation wells for which hydrographs are included in this report..... 7

2.1-1. Map showing location of observation well in the Paleozoic rock aquifers..... 9

2.1-2. Hydrographs showing the water level in observation well 03PP01, Walker County..... 11

2.2-1. Map showing location of observation well in the crystalline rock aquifers..... 13

2.2-2. Hydrographs showing the water level in observation well 10DD02, Fulton County..... 15

2.3-1. Map showing locations of observation wells in the water-table aquifers..... 17

2.3-2. Hydrographs showing the water level in observation well 11AA01, Spalding County..... 19

2.3-3. Hydrographs showing the water level in observation well 12Z001, Lamar County..... 21

2.3-4. Hydrographs showing the water level in observation well 35P094, Chatham County..... 23

2.4-1. Map showing locations of observation wells in the Cretaceous aquifer system..... 25

2.4-2. Hydrographs showing the water level in observation well 28X001, Burke County..... 27

LIST OF ILLUSTRATIONS--Continued

Page

Figure 2.4-3. Hydrographs showing the water level in observation well 18U001, Twiggs County..... 29

2.4-4. Hydrographs showing the water level in observation well 06S001, Chattahoochee County..... 31

2.4-5. Hydrographs showing the water level in observation well 30AA04, Richmond County..... 33

2.4.1-1. Map showing the location of observation well 12L021 and the water level in the Providence aquifer, October 1984..... 35

2.4.1-2. Hydrographs showing the water level in observation well 12L021, Dougherty County..... 37

2.5-1. Map showing observation well locations and the water level in the Clayton aquifer, October 1984..... 39

2.5-2. Hydrographs showing the water level in observation well 05L001, Clay County..... 41

2.5-3. Hydrographs showing the water level in observation well 07N001, Randolph County..... 43

2.5-4. Hydrographs showing the water level in observation well 11L002, Dougherty County..... 45

2.5-5. Hydrographs showing the water level in observation well 13L002, Dougherty County..... 47

2.6-1. Map showing observation well locations and the water level in the Claiborne aquifer, October 1984..... 49

2.6-2. Hydrographs showing the water level in observation well 11L001, Dougherty County..... 51

LIST OF ILLUSTRATIONS--Continued

		Page
Figure 2.6-3.	Hydrographs showing the water level in observation well 12L019, Dougherty County	53
2.6-4.	Hydrographs showing the water level in observation well 13L011, Dougherty County	55
2.7-1.	Map showing the water level in the Floridan aquifer system, November 1982	57
2.7.1-1.	Map showing observation well locations and the water level in the Floridan aquifer system in the southwest area, November 1982	59
2.7.1-2.	Hydrographs showing the water level in observation well 13L003, Dougherty County	61
2.7.1-3.	Hydrographs showing the water level in observation well 13L012, Dougherty County	63
2.7.1-4.	Hydrographs showing the water level in observation well 13J004, Mitchell County	65
2.7.1-5.	Hydrographs showing the water level in observation well 10G313, Mitchell County	67
2.7.1-6.	Hydrographs showing the water level in observation well 09F520, Decatur County	69
2.7.1-7.	Hydrographs showing the water level in observation well 08G001, Miller County	71
2.7.1-8.	Hydrographs showing the water level in observation well 06F001, Seminole County	73

LIST OF ILLUSTRATIONS--Continued

Page

Figure 2.7.2-1. Map showing observation well locations and the water level in the Floridan aquifer system in the south-central area, November 1982..... 75

2.7.2-2. Hydrographs showing the water level in observation well 15L020, Worth County..... 77

2.7.2-3. Hydrographs showing the water level in observation well 17K001, Tift County..... 79

2.7.2-4. Hydrographs showing the water level in observation well 18H016, Cook County..... 81

2.7.2-5. Hydrographs showing the water level in observation well 19F039, Lowndes County..... 83

2.7.2-6. Hydrographs showing the water level in observation well 19E009, Lowndes County..... 85

2.7.3-1. Map showing observation well locations and the water level in the Floridan aquifer system in the east-central area, November 1982..... 87

2.7.3-2. Hydrographs showing the water level in observation well 21T001, Laurens County..... 89

2.7.3-3. Hydrographs showing the water level in observation well 25Q001, Montgomery County..... 91

2.7.3-4. Hydrographs showing the water level in observation well 26R001, Toombs County..... 93

2.7.4-1. Map showing the water level in the Floridan aquifer system in the coastal area, October-November 1984..... 95

LIST OF ILLUSTRATIONS--Continued

Page

Figure 2.7.4.1-1. Map showing observation well locations and the water level in the Floridan aquifer system in the Savannah area, October-November 1984..... 97

2.7.4.1-2. Hydrographs showing the water level in observation well 36Q008, Chatham County..... 99

2.7.4.1-3. Hydrographs showing the water level in observation well 36Q020, Chatham County..... 101

2.7.4.1-4. Hydrographs showing the water level in observation well 38Q002, Chatham County..... 103

2.7.4.1-5. Hydrographs showing the water level in observation well 39Q003, Chatham County..... 105

2.7.4.2-1. Map showing observation well locations and the water level in the Floridan aquifer system in the Jesup-Riceboro area, October-November 1984..... 107

2.7.4.2-2. Hydrographs showing the water level in observation well 30L003, Wayne County..... 109

2.7.4.2-3. Hydrographs showing the water level in observation well 31L001, Wayne County..... 111

2.7.4.2-4. Hydrographs showing the water level in observation well 33M004, Long County..... 113

2.7.4.2-5. Hydrographs showing the water level in observation well 34M054, Liberty County..... 115

2.7.4.2-6. Hydrographs showing the water level in observation well 34N089, Liberty County..... 117

2.7.4.2-7. Hydrographs showing the water level in observation well 35M013, McIntosh County..... 119

LIST OF ILLUSTRATIONS--Continued

Page

Figure 2.7.4.3-1. Map showing observation well locations and the water level in the Floridan aquifer system in the Brunswick area, October-November 1984..... 121

2.7.4.3-2. Hydrographs showing the water level in observation well 33H127, lower water-bearing zone, Glynn County..... 123

2.7.4.3-3. Hydrographs showing the water level in observation well 33H133, upper water-bearing zone, Glynn County..... 125

2.7.4.3-4. Hydrographs showing the water level in observation well 34H391, brackish-water zone, Glynn County..... 127

2.7.4.3-5. Hydrographs showing the water level in observation well 33J044, brackish-water zone, Glynn County..... 129

2.7.4.4-1. Map showing observation well locations and the water level in the Floridan aquifer system in the Kings Bay-Okefenokee Swamp area, October-November 1984..... 131

2.7.4.4-2. Hydrographs showing the water level in observation well 33E027, Camden County..... 133

2.7.4.4-3. Hydrographs showing the water level in observation well 27E002, Charlton County..... 135

3.1-1. Map showing locations of chloride-monitoring wells in the Savannah area..... 137

LIST OF ILLUSTRATIONS--Continued

Page

Figure 3.1-2. Graphs showing chloride concentrations in Chatham County..... 139

3.2-1. Map showing locations of the chloride-monitoring wells and chloride concentrations in the upper water-bearing zone in the Brunswick area, October-November 1984..... 141

3.2-2. Graphs showing chloride concentrations in the Bay Street area of Brunswick..... 143

3.2-3. Graphs showing chloride concentrations in the north Brunswick area..... 145

List of observation wells for which water-level hydrographs are included in this report

County	Aquifer	Well number	Well name	Page
Burke	Cretaceous	28X001	Midville Exp. Sta.	27
Camden	Floridan aquifer system	33E027	Kings Bay	133
Charlton	Floridan aquifer system	27E002	Test well OK8	135
Chatham	Water table	35P094	UGA	23
Chatham	Floridan aquifer system	36Q008	Layne-Atlantic	99
Chatham	Floridan aquifer system	36Q020	Morrison	101
Chatham	Floridan aquifer system	38Q002	Pilot House	103
Chatham	Floridan aquifer system	39Q003	Test well 7, point 3	105
Chattahoochee	Cretaceous	06S001	Fort Benning	31
Clay	Clayton	05L001	W.F. George Dam	41
Cook	Floridan aquifer system	18H016	Adel	81
Decatur	Floridan aquifer system	09F520	Bolton	69
Dougherty	Cretaceous	12L021	Test well 10	37
Dougherty	Clayton	11L002	Albany Nurseery	45
Dougherty	Clayton	13L002	Turner City	47
Dougherty	Claiborne	11L001	Test well 4	51
Dougherty	Claiborne	12L019	Test well 5	53
Dougherty	Claiborne	13L011	Test well 2	55
Dougherty	Floridan aquifer system	13L003	Albany-Dougherty Co.	61
Dougherty	Floridan aquifer system	13L012	Test well 3	63
Fulton	Crystalline rock	10DD02	Fort McPherson	15
Glynn	Floridan aquifer system	33H127	Test well 3	123
Glynn	Floridan aquifer system	33H133	Test well 6	125
Glynn	Floridan aquifer system	33J044	Test well 27	129

List of observation wells for which water-level hydrographs are included in this report--Continued

County	Aquifer	Well number	Well name	Page
Glynn	Floridan aquifer system	34H391	Test well 16	127
Lamar	Water table	12Z001	Dixie Pipeline	21
Laurens	Floridan aquifer system	21T001	Hogan	89
Liberty	Floridan aquifer system	34M054	Test well 2	115
Liberty	Floridan aquifer system	34N089	Test well 1	117
Long	Floridan aquifer system	33M004	Test well 3	113
Lowndes	Floridan aquifer system	19E009	Valdosta	85
Lowndes	Floridan aquifer system	19F039	Valdosta 8	83
McIntosh	Floridan aquifer system	35M013	Harris Neck	119
Miller	Floridan aquifer system	08G001	Fleet	71
Mitchell	Floridan aquifer system	10G313	Meinders	67
Mitchell	Floridan aquifer system	13J004	Wright	65
Montgomery	Floridan aquifer system	25Q001	Uvalda School	91
Randolph	Clayton	07N001	Cuthbert	43
Richmond	Cretaceous	30AA04	McBean 2	33
Seminole	Floridan aquifer system	06F001	Roddenberry	73
Spalding	Water table	11AA01	Experiment Station	19
Tift	Floridan aquifer system	17K001	SCL Railroad	79
Toombs	Floridan aquifer system	26R001	Vidalia 2	93
Twiggs	Cretaceous	18U001	Test well 3	29
Walker	Paleozoic rock	03PP01	Fort Oglethorpe	11
Wayne	Floridan aquifer system	30L003	Johnson	109
Wayne	Floridan aquifer system	31L001	Mears 2	111
Worth	Floridan aquifer system	15L020	Sylvester	77

ABSTRACT

Continuous water-level records from 155 wells and more than 800 water-level measurements made in Georgia during 1984 provide the basic data for this report. Selected wells illustrate the effects that changes in recharge and pumping have had on the various ground-water resources in the State. Daily mean water levels are shown in hydrographs for 1984. Monthly means are shown for the 10-year period 1975-84. Mean annual water levels ranged from 7 feet lower to 7 feet higher in 1984 than in 1983. Water-quality samples are collected periodically throughout Georgia and analyzed as part of areal and regional ground-water studies. Along the coast, chloride concentrations in the Floridan aquifer system continued to fluctuate.

1.0 INTRODUCTION

Monitoring ground-water levels and water quality is essential to the management of a ground-water reservoir or aquifer. Fluctuations and long-term trends in water levels occur as a result of recharge to and discharge from the aquifer. Recharge varies in response to precipitation, evapotranspiration, and surface-water infiltration into the aquifer. Discharge occurs as natural flow from the aquifer to streams and springs, direct ground-water evapotranspiration, and withdrawal from wells.

Ground-water levels have been monitored in Georgia for at least a hundred years. In the early years, these data were used in areal reconnaissance studies, and published, usually as tables, with a few graphs of water-level trends. These data had limited value, especially considering the time-lag between data collection and publication.

As part of the cooperative ground-water investigations undertaken by the U.S. Geological Survey and the State of Georgia, a statewide water-level measurement program to monitor long-term trends was begun in 1938. This program initially consisted of an observation well network to provide long-term data on changes in ground-water storage in the coastal area. Other wells were added in areas where changes in water levels might forewarn of potential water-quality problems. More than 800 water-level measurements were made in Georgia during 1984, and 155 network and project wells were monitored continuously.

This report continues a series of publications that annually presents both water-level and water-quality data for Georgia. Forty-eight wells have been selected to illustrate the effects that changes in recharge and pumping have had on the various aquifers in the State. Daily mean water levels are shown in hydrographs for 1984. Monthly mean water levels, as well as chloride concentrations in selected areas along the coast, are shown for the 10-year period 1975-84. Because the 1984 hydrographs are plotted from daily mean values, the record low or high water level occurring on a day will be lower or higher than that shown on the hydrograph, which shows the mean for that day.

The cooperation and assistance of the following agencies in collecting water-level and water-quality data during 1984 are gratefully acknowledged: Georgia Department of Natural Resources, Georgia Geologic Survey; Chatham County; Glynn County; the cities of Brunswick and Valdosta; and the Albany Water, Gas, and Light Commission.

The writers are grateful to the following individuals who contributed significantly to the collection, processing, and tabulation of the data: Harry E. Blanchard, Jr., Frank G. Boucher, Darrell D. Dorminey, Timothy W. Hale, David W. Hicks, the late Alfred M. F. Johnson, Charles N. Joiner, Stephen H. Jones, Terry R. Nichols, Mark E. Price, Mark S. Reynolds, Welby L. Stayton, and Blaine T. White.

Willis G. Hester and Ellie R. Black (U.S. Geological Survey) drafted the illustrations and Carolyn A. Casteel typed the text of the report.

1.1 Major Aquifers

Differing geologic features and landforms of the several physiographic provinces of Georgia cause significant differences in ground-water conditions from one part of the State to another. The most productive aquifers in the State are located in the Coastal Plain province which includes the southern half of Georgia. The Coastal Plain is underlain by alternating layers of sand, clay, and limestone that dip and thicken to the southeast. In the Coastal Plain, aquifers are generally confined, except near their northern limit where they are exposed or are near land surface. Major aquifers of the Coastal Plain include the predominantly limestone Floridan aquifer system, the sandy Claiborne aquifer, the limestone Clayton aquifer, and the sandy Cretaceous aquifer system. The Piedmont and Blue Ridge provinces, which include most of the northern half of Georgia, are underlain by massive igneous and metamorphic rocks that form aquifers of low permeability. The Valley and Ridge and Appalachian Plateau provinces, which include the northwestern corner of Georgia, are underlain by layers of sandstone, limestone, dolostone, and shale of Paleozoic age. Water-table conditions occur where the aquifers are unconfined and near land surface. For a more complete discussion of aquifers, see Selected References for a list of reports pertaining to these aquifers.

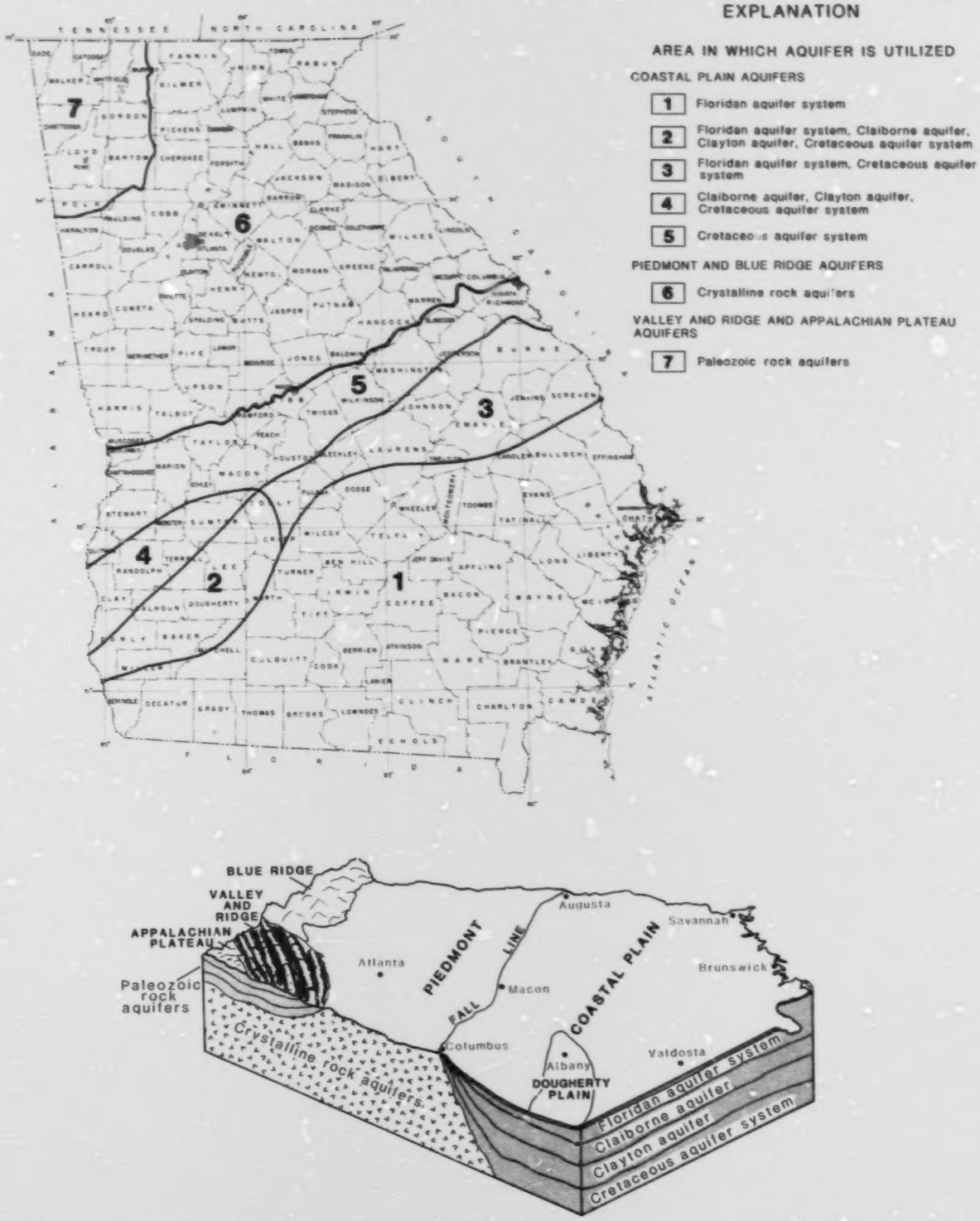

Figure 1.1-1.—Areas of utilization of major aquifers and block diagram showing major aquifers and physiographic provinces of Georgia.

2.0 GROUND-WATER LEVELS

Mean annual ground-water levels in Georgia ranged from 7 feet lower to 7 feet higher in 1984 than in 1983. Of the 48 wells selected for this report, 20 had mean annual water levels that were higher in 1984 than in 1983, and 28 had mean annual water levels that were lower in 1984 than in 1983. Two of the wells had new record lows and eight had new record highs.

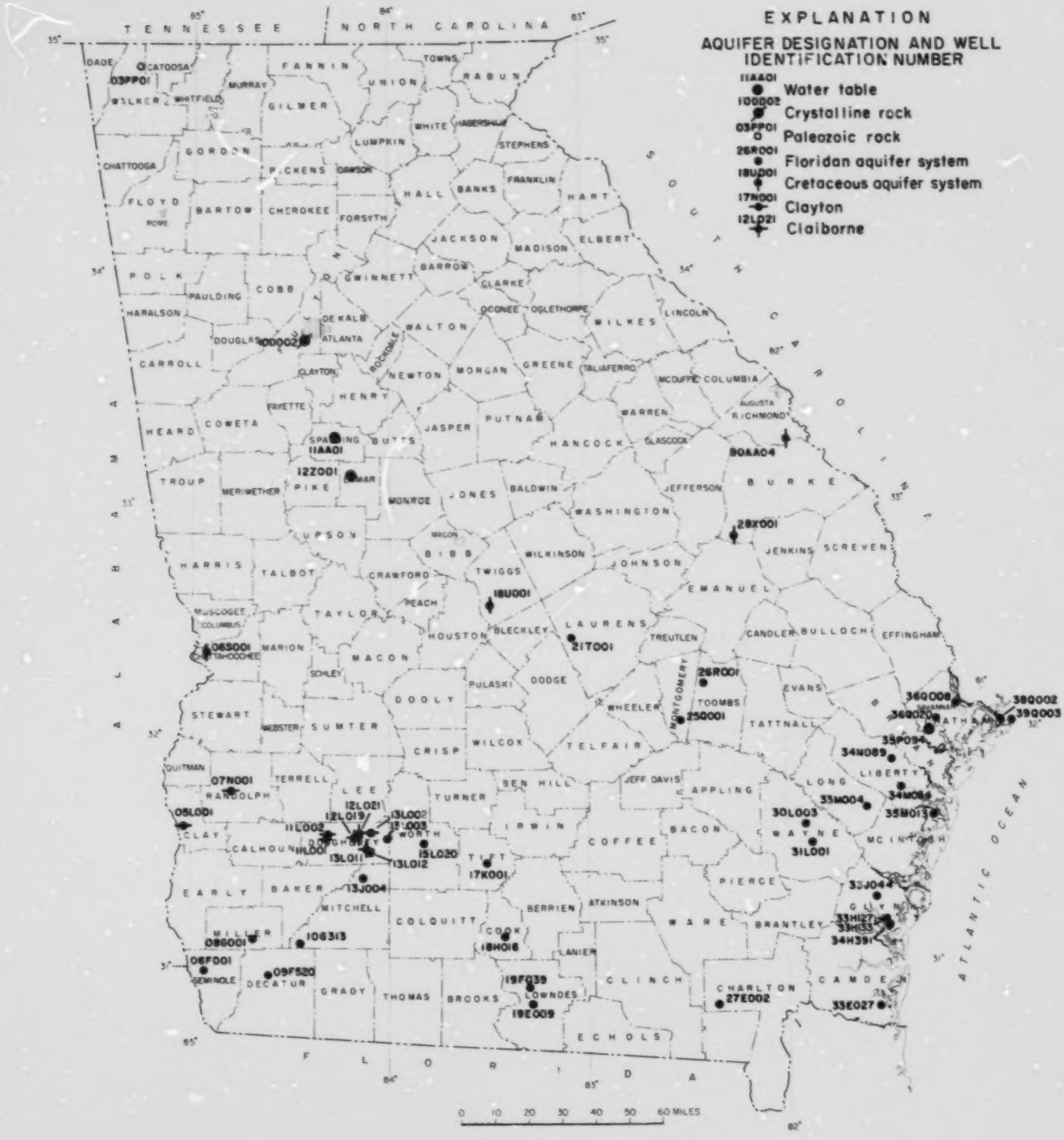

Figure 2.0-1.—Locations of observation wells for which hydrographs are included in this report.

2.1 Paleozoic Rock Aquifers

During 1980, an estimated 33 Mgal/d was withdrawn from the Paleozoic rock aquifers, primarily for industrial supply (Clarke and Pierce, 1984). Water in the Paleozoic rock aquifers occurs generally under water-table conditions, and storage is limited mainly to joints, fractures, and openings in the bedrock caused by solutioning.

Ground-water levels in the Paleozoic rock aquifers are affected mainly by changes in precipitation. Rainfall in the area is heavy in winter and midsummer and relatively light in spring and autumn. Water levels generally are at their highest for the year in March or April and at their lowest for the year in October, November, and December.

Wells in areas having a thin soil cover commonly show a rapid response to heavy rainfall and may experience a water-level rise of several feet within a few minutes or hours. In areas having a thick soil cover, wells may show little response to individual rainfall events, but undergo a gradual rise in water level during wet periods. Most wells experience a slow decline in water level between rains.

The hydrographs for observation well 03PP01 (Fort Oglethorpe) illustrate the cyclic effects that precipitation has on water levels in areas of thin soil cover. Mean annual water levels at well 03PP01 were about 0.7 foot higher in 1984 than in 1983.

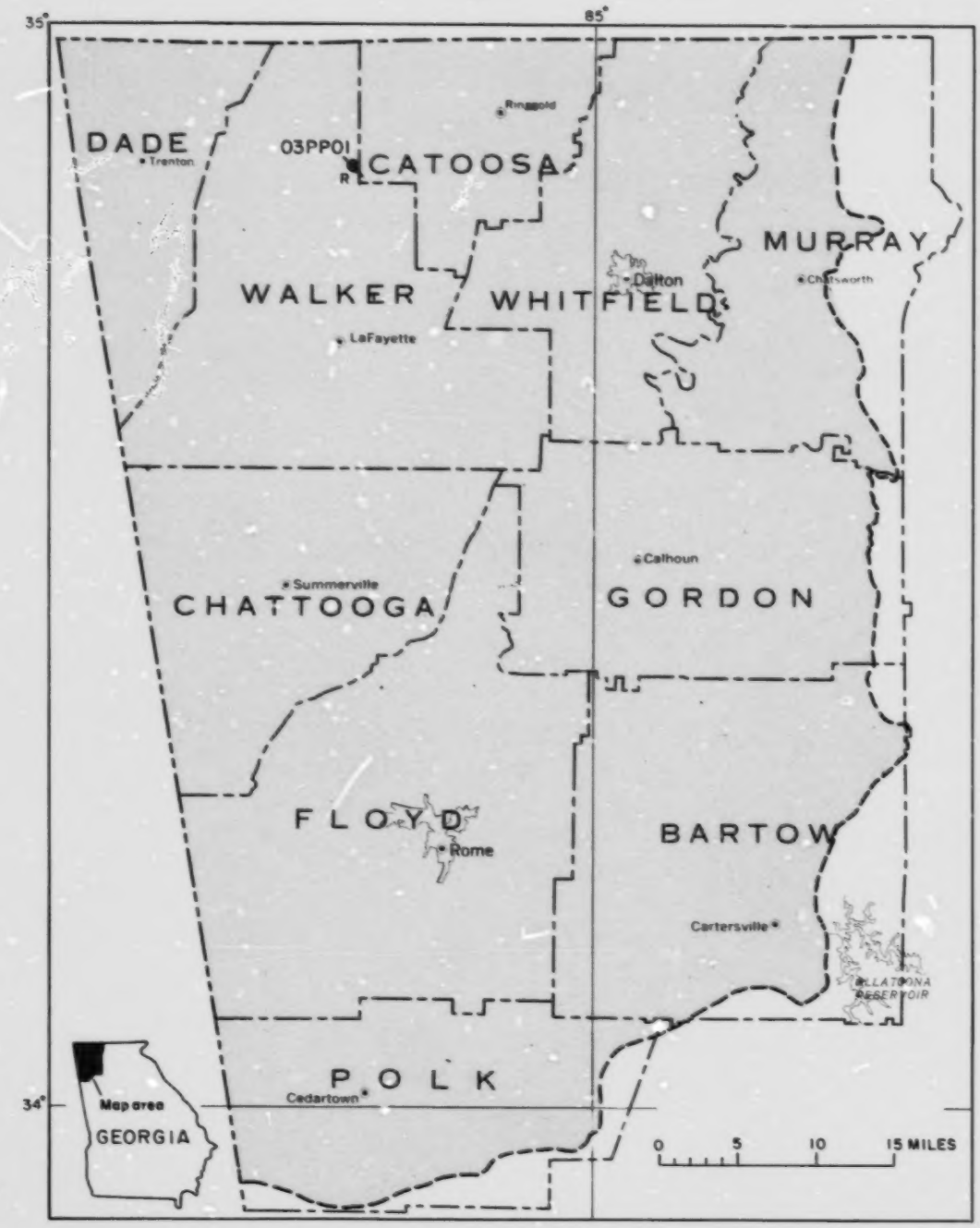

Figure 2.1-1.—Location of observation well in the Paleozoic rock aquifers.

03PF01 FORT OGLETHORPE WALKER COUNTY

345403085160001 Local number, 03PF01.
LOCATION.--Lat 34°54'03", long 85°16'00", Hydrologic Unit 06020001, Chickamauga and Chattanooga National Military Park.
Owner: National Park Service, Fort Oglethorpe.
AQUIFER.--Chickamauga Limestone.
WELL CHARACTERISTICS.--Cable-tooled, unused observation well, diameter 8 in., depth 72 ft.
DATUM.--Altitude of land-surface datum is 730 ft.
Measuring point: Pointer on recorder shelter, 2.09 ft above land surface.
REMARKS.--Well sounded October 18, 1977.
PERIOD OF RECORD.--1977 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 3.86 ft below land-surface datum, April 3, 1979; lowest, 21.70 ft below land-surface datum, August 5, 1978.

Water level, in feet below land surface, through calendar year 1984 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	10.76	10.87	10.68	10.75	10.70	13.85	17.03	10.03	16.46	19.07	15.05	11.65
2	10.86	10.91	10.73	10.77	7.63	13.99	16.57	10.71	16.65	19.11	15.20	11.04
3	10.91	10.92	10.77	8.66	4.73	14.14	16.53	10.87	16.74	19.14	15.31	10.52
4	10.98	10.96	10.78	7.94	5.40	14.30	16.89	11.09	16.85	19.18	15.44	10.98
5	11.04	11.04	9.89	9.99	10.53	14.50	16.73	11.32	17.00	19.23	15.59	10.62
6	11.12	11.18	10.35	10.65	10.68	14.61	16.60	11.61	17.13	19.28	15.76	10.46
7	11.26	11.37	10.69	10.70	6.92	14.77	12.83	11.89	17.21	19.32	15.90	10.88
8	11.44	11.55	10.75	10.74	5.46	14.92	14.03	12.20	17.30	19.34	16.00	11.06
9	11.58	11.71	10.78	8.02	9.56	15.07	14.40	12.50	17.38	17.36	16.10	11.31
10	8.93	10.65	10.79	9.63	10.63	15.23	14.68	12.84	17.48	17.64	14.89	11.58
11	8.90	10.47	10.80	10.61	10.72	15.38	14.91	13.06	17.58	18.42	14.28	11.82
12	10.67	8.99	10.81	10.70	10.77	15.51	11.62	13.27	17.68	18.62	14.69	12.07
13	10.76	5.84	10.82	10.74	10.80	15.65	10.33	13.50	17.77	18.73	14.96	12.40
14	10.79	8.31	10.83	10.77	10.84	15.79	11.39	13.73	17.90	18.81	15.15	12.72
15	10.81	10.39	10.83	10.78	10.91	15.88	11.93	13.94	18.05	18.89	15.30	12.96
16	10.79	10.69	9.35	10.79	11.02	16.02	11.92	14.14	18.16	18.98	15.42	13.13
17	10.80	10.75	10.53	10.81	11.17	16.20	9.69	14.32	18.23	18.95	15.51	13.30
18	8.41	10.79	10.51	10.83	11.32	16.37	9.87	14.48	18.29	18.87	15.59	13.47
19	9.97	10.81	10.64	10.85	11.49	16.52	11.02	14.64	18.34	18.93	14.82	13.62
20	10.71	10.82	8.41	7.73	11.72	16.63	11.40	14.77	18.40	18.96	14.47	13.52
21	10.76	10.83	9.57	9.28	11.97	16.71	11.81	14.96	18.48	19.01	14.76	13.34
22	10.79	10.83	10.64	7.74	12.20	14.94	12.22	15.17	18.60	14.28	14.96	13.25
23	8.20	10.15	10.72	8.92	12.42	15.02	12.58	15.29	18.69	11.50	15.11	13.20
24	6.08	10.68	10.74	10.34	12.63	15.62	12.89	15.43	18.73	12.04	15.25	13.20
25	9.40	10.74	10.75	10.72	12.81	15.90	13.15	15.59	18.78	12.87	15.39	13.17
26	10.60	10.77	10.77	10.77	13.00	16.12	13.38	15.73	18.87	13.37	15.50	13.18
27	10.69	7.41	10.73	10.77	13.17	16.11	13.65	15.85	18.93	13.74	13.05	13.25
28	10.74	9.33	8.02	9.25	13.30	16.59	13.91	15.95	19.00	14.09	9.84	13.34
29	10.78	10.57	8.02	10.24	13.43	16.74	14.12	16.12	19.06	14.39	10.96	13.42
30	10.81	---	10.46	10.63	13.58	16.87	14.01	16.31	19.05	14.65	11.28	13.54
31	10.85	---	10.70	---	13.72	---	11.17	16.41	---	14.87	---	13.63
MEAN	10.76	10.36	10.35	10.03	10.91	15.53	13.33	13.80	17.96	17.15	14.72	12.44

CAL YR 1984 MEAN 13.08 HIGH 4.73 LOW 19.34

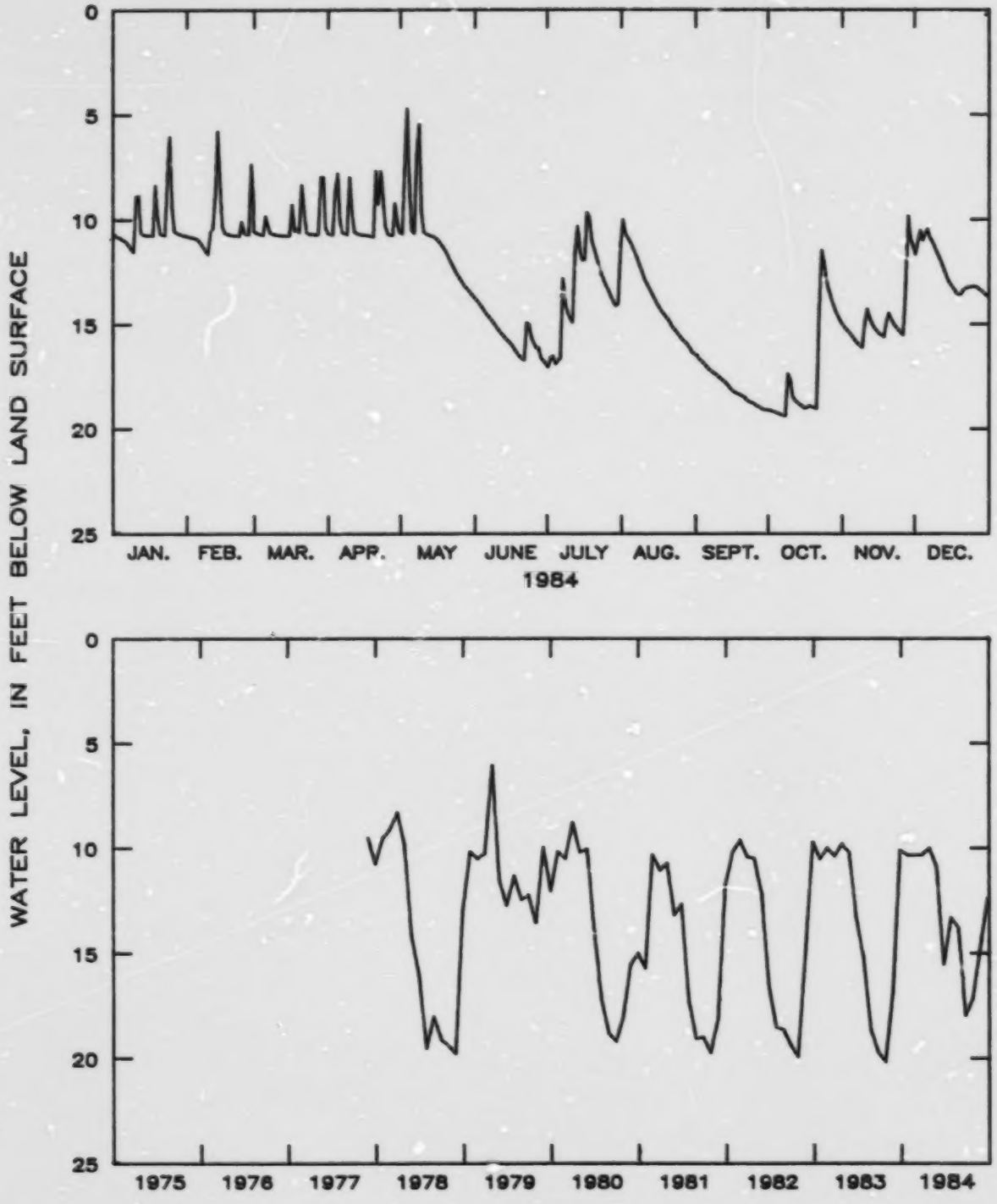

Figure 2.1–2.––Water level in observation well 03PP01, Walker County.

2.2 Crystalline Rock Aquifers

Although individual crystalline rock aquifers are not laterally extensive, collectively they yielded an estimated 99 Mgal/d in 1980, primarily for rural supply (Clarke and Pierce, 1984). Ground-water storage occurs in unconsolidated material overlying the crystalline rock and in joints, fractures, and other types of secondary openings within the rock (Cressler and others, 1983).

Ground-water levels in the crystalline rock aquifers are affected mainly by seasonal changes in precipitation and evapotranspiration. Rainfall in the area is heavy in winter and midsummer and relatively light in spring and autumn. Autumn is the driest season of the year. Ground-water levels rise rapidly with the onset of late winter rains and reduced evapotranspiration, and generally reach their highest levels for the year in March or April. Increases in evapotranspiration and decreases in rainfall during the spring and early summer cause ground-water levels to decline. Heavy precipitation in midsummer may cause small rises in ground-water levels, but the lack of recharge from light rainfall in the autumn results in water levels declining to the annual lows, generally in October or November.

The mean annual water level in the crystalline rock aquifer at well 10DD02 in Fulton County was slightly higher in 1984 than in 1983.

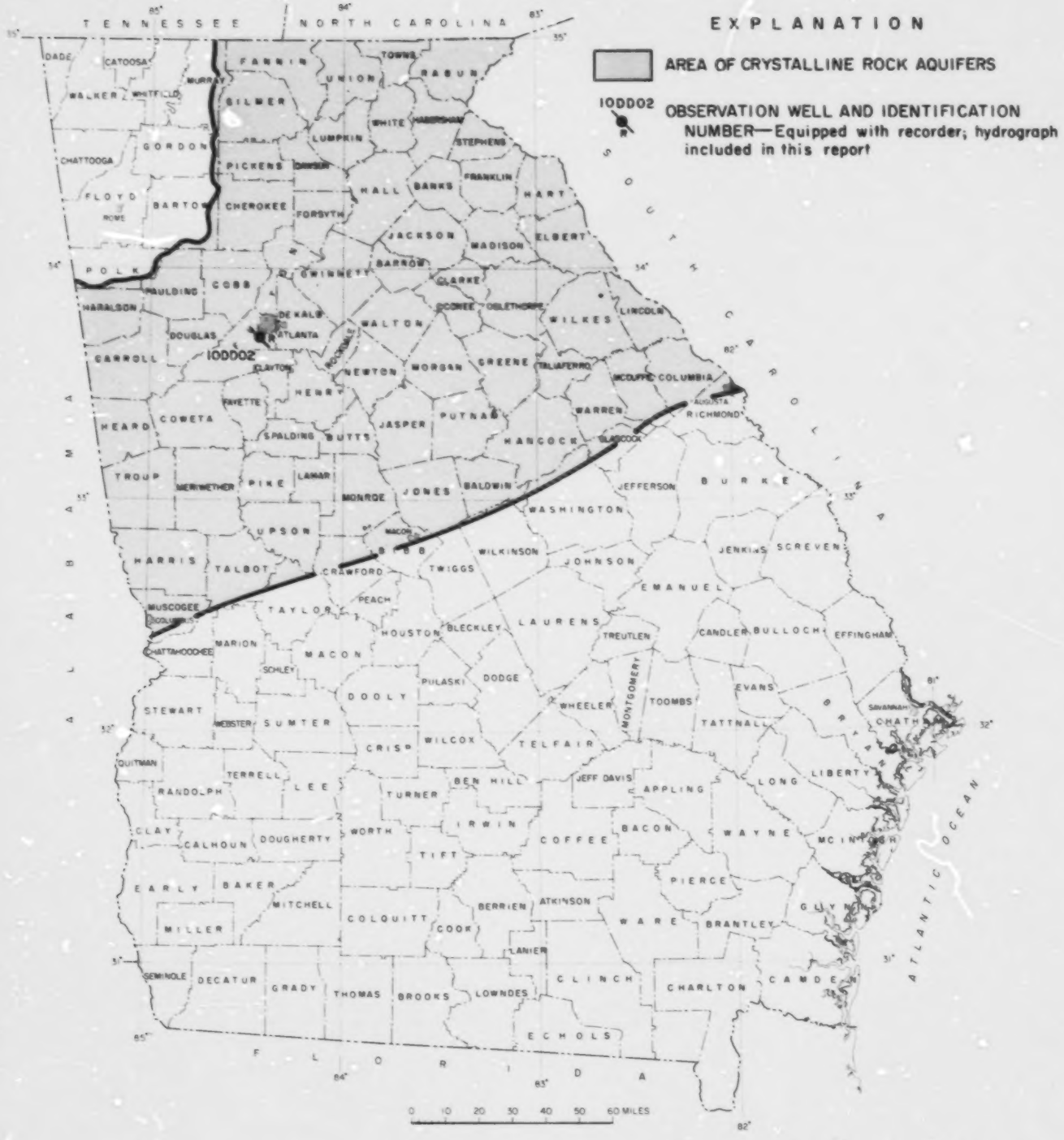

Figure 2.2-1.—Location of observation well in the crystalline rock aquifers.

10DD02 FORT MCPHERSON FULTON COUNTY

334207084254801 Local number, 10DD02.
LOCATION.--Lat 33°42'07", long 84°25'48", Hydrologic Unit 03130002, 100 ft east of parking lot at main entrance.
Owner: U.S. Army, Fort McPherson.
AQUIFER.--Biotite gneiss.
WELL CHARACTERISTICS.--Drilled unused supply well, diameter 12 in., depth 338 ft, cased to 41 ft, open hole.
DATUM.--Altitude of land-surface datum is 1,013 ft.
Measuring point: At land-surface datum.
REMARKS.--Well pumped and sounded February 14, 1976, to a depth of 338 ft. Borehole geophysical survey conducted November 19, 1974. Water levels for periods of missing recorder record, January 19-20, and January 27-30, were estimated.
PERIOD OF RECORD.--November 1973 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 0.10 ft below land-surface datum, March 30, 1980; lowest, 8.09 ft below land-surface datum, September 1-2, 1983.

Water level, in feet below land surface, through calendar year 1984 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	6.07	5.61	5.10	4.89	4.59	4.69	5.65	5.59	5.86	6.71	7.24	7.54
2	6.04	5.61	5.12	4.87	4.47	4.71	5.73	5.53	5.95	6.79	7.20	7.58
3	6.00	5.51	5.19	4.73	4.17	4.72	5.77	5.44	5.92	6.77	7.17	7.42
4	5.96	5.42	5.18	4.67	3.94	4.77	5.75	5.40	5.93	6.79	7.19	7.24
5	5.90	5.44	5.02	4.60	4.13	4.85	5.74	5.43	6.01	6.93	7.31	7.05
6	5.90	5.57	4.85	4.70	4.31	4.92	5.80	5.45	6.08	6.89	7.40	6.91
7	6.01	5.71	4.97	4.78	4.41	4.95	5.84	5.43	6.14	6.95	7.40	6.96
8	6.11	5.74	5.07	4.80	4.43	4.96	5.89	5.43	6.18	6.91	7.36	6.95
9	6.13	5.68	5.12	4.73	4.44	5.01	5.93	5.47	6.10	6.90	7.25	6.95
10	5.81	5.62	5.15	4.72	4.45	5.04	5.93	5.49	6.06	6.94	7.25	6.93
11	5.55	5.60	5.12	4.73	4.48	5.08	5.92	5.48	6.19	6.97	7.37	6.95
12	5.76	5.57	5.12	4.73	4.48	5.12	5.93	5.49	6.16	6.99	7.43	6.95
13	5.98	5.35	5.10	4.71	4.48	5.17	5.94	5.51	6.21	6.96	7.45	7.00
14	5.98	4.93	5.17	4.68	4.47	5.17	5.92	5.54	6.22	6.94	7.44	7.12
15	5.86	5.04	5.17	4.64	4.52	5.20	5.87	5.56	6.24	6.96	7.42	7.19
16	5.80	5.17	5.12	4.70	4.56	5.26	5.74	5.56	6.33	7.05	7.44	7.16
17	5.85	5.21	5.08	4.70	4.60	5.29	5.58	5.53	6.51	7.14	7.40	7.15
18	5.76	5.26	5.03	4.74	4.62	5.28	5.45	5.51	6.43	7.17	7.34	7.14
19	5.72	5.25	4.96	4.80	4.50	5.30	5.43	5.51	6.39	7.16	7.45	7.11
20	5.69	5.25	4.83	4.60	4.41	5.35	5.47	5.59	6.38	7.18	7.46	7.10
21	5.65	5.24	4.62	4.46	4.47	5.38	5.52	5.67	6.39	7.20	7.46	7.11
22	5.73	5.27	4.71	4.48	4.48	5.40	5.53	5.76	6.51	7.21	7.46	7.15
23	5.68	5.23	4.90	4.45	4.52	5.43	5.57	5.68	6.60	7.21	7.45	7.23
24	5.58	5.26	4.91	4.54	4.56	5.44	5.63	5.71	6.58	7.21	7.45	7.23
25	5.57	5.36	4.83	4.64	4.61	5.46	5.63	5.80	6.62	7.26	7.46	7.26
26	5.59	5.35	4.88	4.66	4.64	5.51	5.63	5.90	6.60	7.25	7.46	7.35
27	5.53	5.02	4.84	4.65	4.70	5.53	5.70	5.88	6.64	7.21	7.45	7.41
28	5.54	4.66	4.64	4.61	4.72	5.58	5.82	5.88	6.69	7.19	7.45	7.37
29	5.56	4.89	4.60	4.60	4.67	5.58	5.85	5.86	6.64	7.23	7.45	7.30
30	5.57	---	4.80	4.55	4.65	5.56	5.82	5.83	6.66	7.29	7.40	7.29
31	5.58	---	4.90	---	4.66	---	5.69	5.84	---	7.31	---	7.29
MEAN	5.76	5.34	4.97	4.67	4.49	5.19	5.73	5.60	6.31	7.05	7.38	7.17

CAL YR 1984 MEAN 5.81 HIGH 3.94 LOW 7.59

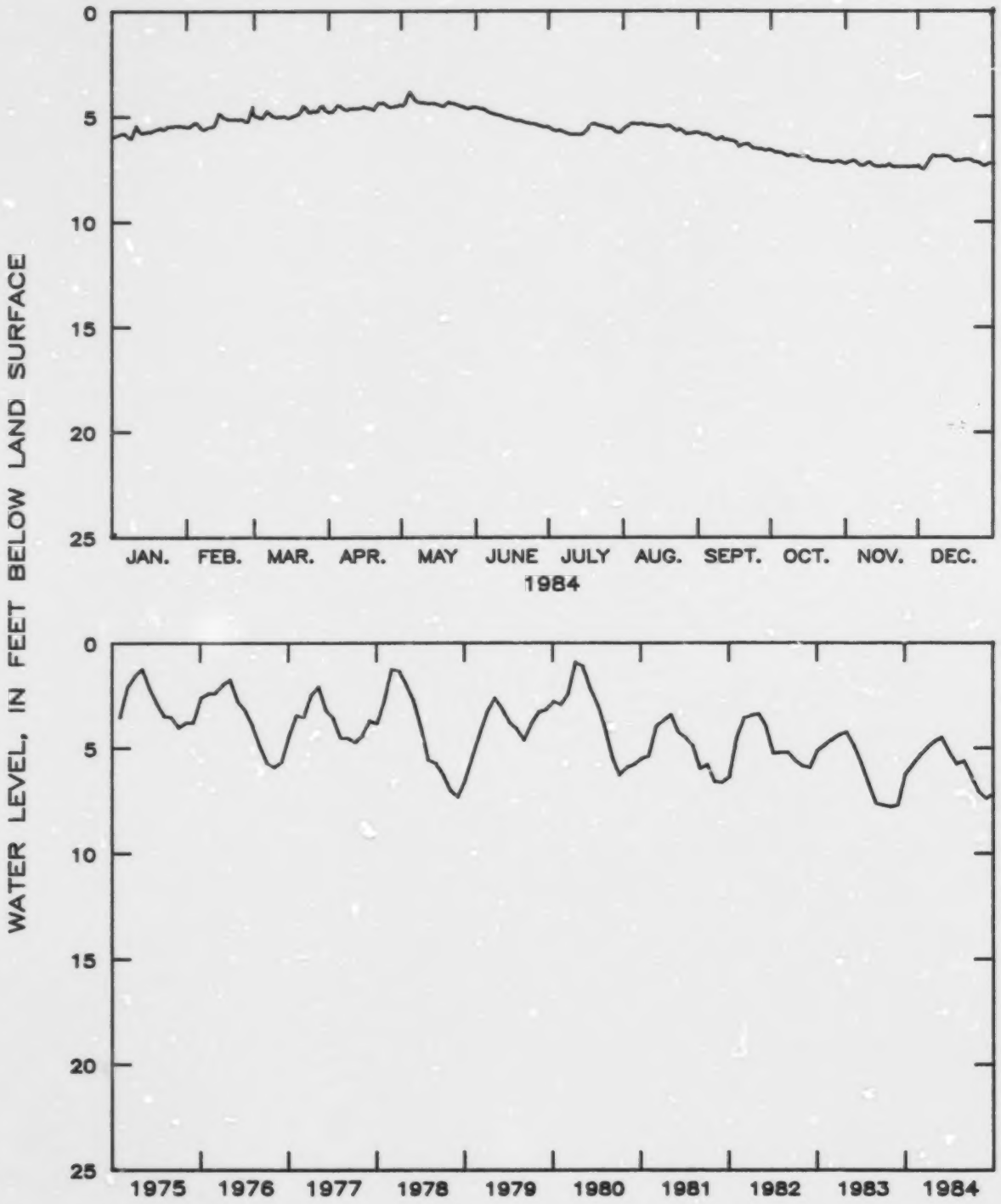

Figure 2.2–2.––Water level in observation well 10DD02, Fulton County.

2.3 Water-Table Aquifers

Shallow water-table aquifers are used for domestic and stock supplies in most areas of Georgia. Water-level fluctuations in these aquifers are caused mainly by changes in precipitation; water levels generally rise rapidly during wet periods and decline slowly during dry periods. Prolonged droughts may cause water levels, particularly on hill tops and steep slopes, to decline below the intakes of dug, bored, or shallow drilled wells, resulting in well failures. Generally, the well yields are restored with the return of adequate precipitation.

Mean annual water levels for three wells in shallow water-table aquifers ranged from 0.2 foot lower to 0.4 foot higher in 1984 than in 1983. The 10-year hydrographs illustrate the water-level recovery from the effects of the 1981 drought.

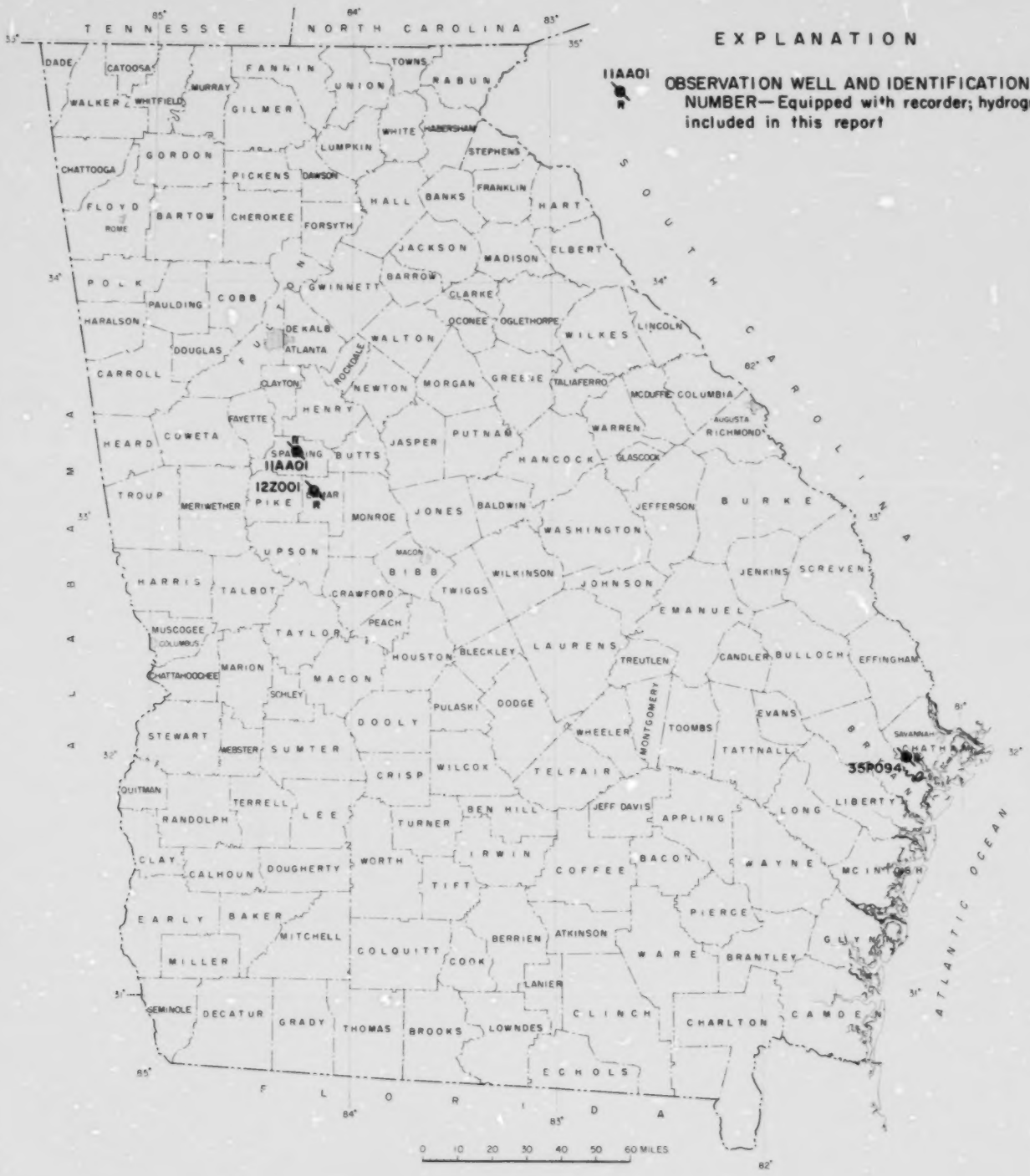

Figure 2.3-1.— Locations of observation wells in the water-table aquifers.

11AA01 EXPERIMENT STATION SPALDING COUNTY

331507084171801 Local number, 11AA01.
LOCATION.--Lat 33°15'54", long 84°16'56", Hydrologic Unit 03070103, University of Georgia Experiment Station, Experiment, Ga.
Owner: University of Georgia.
AQUIFER.--Residuum.
WELL CHARACTERISTICS.--Dug unused water-table well, size 4 x 4 ft, depth 30 ft, open hole.
DATUM.--Altitude of land-surface datum is 960 ft.
Measuring point: Hole in floor of recorder shelter, 3.1 ft above land-surface datum.
REMARKS.--Water levels for period of missing recorder record, June 30 to July 26, were estimated.
PERIOD OF RECORD.--October 1943 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 8.26 ft below land-surface datum, March 19, 1948; lowest, 21.78 ft below land-surface datum, December 13, 1981.

Water level, in feet below land surface, through calendar year 1984 daily mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	14.19	12.79	12.11	11.81	12.47	13.00	14.90	15.16	15.14	17.00	18.35	18.99
2	14.11	12.79	12.04	11.79	12.41	13.04	15.03	14.91	15.20	17.05	18.35	19.00
3	14.06	12.69	12.07	11.71	12.32	13.07	15.11	14.67	15.24	17.09	18.37	19.00
4	14.01	12.68	12.05	11.60	12.21	13.13	15.22	14.48	15.32	17.14	18.39	19.00
5	13.97	12.72	11.96	11.70	12.14	13.22	15.31	14.35	15.41	17.20	18.41	18.90
6	13.97	12.90	11.90	11.76	12.05	13.28	15.41	14.25	15.49	17.26	18.48	18.79
7	14.09	12.98	11.85	11.84	12.04	13.33	15.45	14.17	15.57	17.31	18.52	18.73
8	14.15	12.99	11.87	11.85	12.00	13.38	15.57	14.12	15.63	17.34	18.53	18.60
9	14.17	12.96	11.90	11.78	12.02	13.43	15.67	14.10	15.66	17.39	18.53	18.53
10	13.98	12.96	11.86	11.77	12.03	13.50	15.77	14.08	15.71	17.45	18.52	18.45
11	14.01	12.98	11.85	11.76	12.06	13.56	15.87	14.04	15.80	17.50	18.57	18.41
12	13.99	12.93	11.86	11.75	12.09	13.63	15.95	14.08	15.88	17.55	18.61	18.38
13	13.89	12.86	11.86	11.74	12.12	13.69	16.04	14.11	15.95	17.57	18.65	18.38
14	13.82	12.70	11.86	11.74	12.14	13.74	16.09	14.14	15.99	17.62	18.67	18.40
15	13.76	12.58	11.87	11.75	12.22	13.82	16.15	14.17	16.05	17.68	18.68	18.39
16	13.70	12.45	11.86	11.78	12.29	13.90	16.20	14.18	16.16	17.76	18.69	18.38
17	13.74	12.41	11.88	11.85	12.37	13.95	16.17	14.19	16.22	17.82	18.73	18.38
18	13.64	12.36	11.89	11.96	12.40	14.00	16.03	14.21	16.25	17.85	18.72	18.38
19	13.54	12.34	12.01	12.01	12.39	14.07	15.98	14.26	16.29	17.90	18.74	18.37
20	13.41	12.34	11.96	12.05	12.43	14.14	15.75	14.34	16.33	17.95	18.82	18.38
21	13.31	12.34	12.00	12.07	12.53	14.21	15.71	14.46	16.40	17.99	18.85	18.39
22	13.25	12.37	12.07	12.03	12.59	14.27	15.73	14.49	16.50	18.03	18.86	18.41
23	13.13	12.37	12.03	12.01	12.60	14.35	15.79	14.49	16.56	18.07	18.86	18.46
24	13.01	12.42	12.02	12.13	12.65	14.41	15.87	14.59	16.59	18.11	18.88	18.46
25	13.01	12.52	11.89	12.22	12.68	14.48	15.98	14.70	16.64	18.16	18.91	18.52
26	13.01	12.54	11.87	12.26	12.74	14.55	15.99	14.79	16.70	18.18	18.94	18.59
27	12.90	12.24	11.75	12.30	12.79	14.62	15.83	14.83	16.78	18.20	18.95	18.59
28	12.84	12.14	11.56	12.37	12.83	14.71	15.86	14.89	16.81	18.23	18.94	18.59
29	12.79	12.16	11.77	12.39	12.86	14.74	15.94	14.96	16.88	18.26	18.96	18.60
30	12.76	---	11.87	12.40	12.91	14.83	15.72	15.00	16.93	18.29	18.95	18.63
31	12.81	---	11.85	---	12.95	---	15.41	15.05	---	18.33	---	18.65
MEAN	13.58	12.61	11.93	11.94	12.40	13.87	15.72	14.46	16.07	17.72	18.68	18.57

CAL YR 1984 MEAN 14.80 HIGH 11.56 LOW 19.00

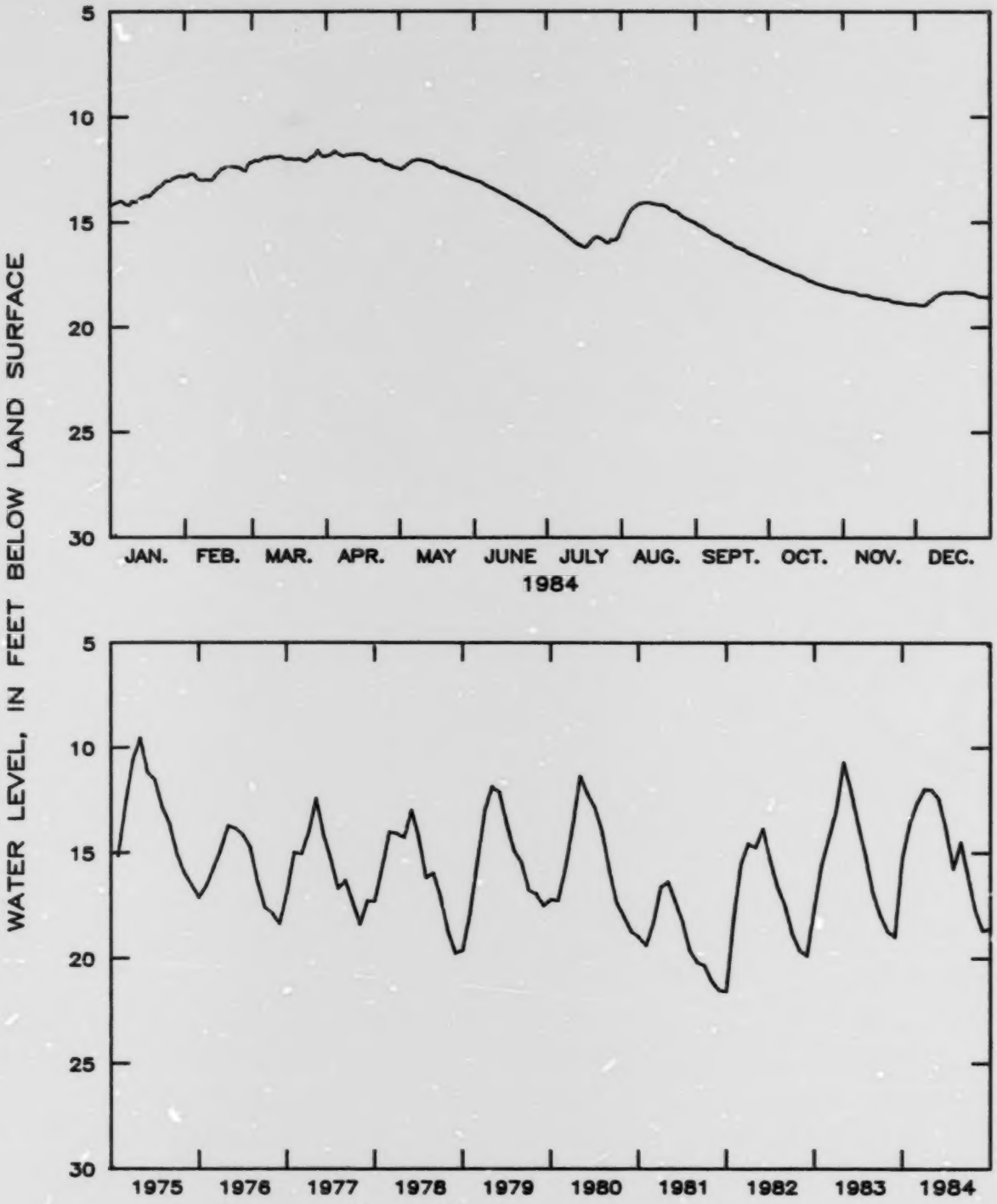

Figure 2.3–2.––Water level in observation well 11AA01, Spalding County.

12Z001 DIXIE PIPELINE LAMAR COUNTY

330858084122901 Local number, 12Z001.
LOCATION.--Lat 33°08'58", long 84°12'29", Hydrologic Unit 03130005, north of Milner, Ga., at the gas storage center.
Owner: Dixie Pipeline Co.
AQUIFER.--Residuum.
WELL CHARACTERISTICS.--Bored observation well, diameter 24 in., depth 31 ft, cased to 31 ft.
DATUM.--Altitude of land-surface datum is 852 ft.
Measuring point: Floor of recorder shelter, 2.0 ft above land-surface datum.
REMARKS.--Water levels for periods of missing recorder record, February 1, August 25-26, September 1-3, 8-9, 15-16, 22-23, and November 4-6, were estimated.
PERIOD OF RECORD.--January 1967 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 5.37 ft below land-surface datum, April 9, 1973; lowest, 15.20 ft below land-surface datum, December 1, 1981.

Water level, in feet below land surface, through calendar year 1984 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	8.80	7.84	7.40	7.14	8.00	8.64	10.07	7.99	9.13	10.50	11.61	12.28
2	8.50	7.90	7.32	7.16	8.01	8.69	10.12	7.62	9.15	10.55	11.64	12.30
3	8.60	7.87	7.37	7.12	7.97	8.73	10.14	7.28	9.16	10.60	11.66	12.20
4	8.59	7.87	7.38	7.02	7.86	8.79	10.20	7.09	9.18	10.65	11.68	12.21
5	8.62	7.93	7.32	7.05	7.65	8.85	10.24	7.06	9.25	10.67	11.70	12.11
6	8.69	8.08	7.17	7.15	7.48	8.91	10.28	6.97	9.32	10.70	11.73	11.94
7	8.82	8.24	7.06	7.23	7.44	8.96	10.27	6.92	9.45	10.74	11.75	11.79
8	8.90	8.33	6.97	7.31	7.43	9.02	10.33	6.96	9.46	10.77	11.79	11.68
9	8.85	8.36	6.97	7.24	7.47	9.09	10.38	7.05	9.48	10.82	11.84	11.60
10	8.53	8.39	7.03	7.07	7.54	9.15	10.43	7.18	9.50	10.85	11.87	11.56
11	8.74	8.44	7.04	6.94	7.62	9.21	10.47	7.28	9.57	10.89	11.87	11.53
12	8.47	8.46	7.09	6.91	7.70	9.26	10.50	7.40	9.63	10.93	11.87	11.53
13	8.39	8.36	7.14	6.92	7.77	9.30	10.53	7.52	9.68	10.96	11.90	11.55
14	8.37	8.11	7.23	6.94	7.82	9.34	10.53	7.63	9.85	11.00	11.94	11.60
15	8.32	7.97	7.31	6.97	7.90	9.39	10.54	7.74	9.85	11.03	11.96	11.64
16	8.34	7.70	7.34	7.03	7.99	9.45	10.53	7.83	9.87	11.06	11.98	11.68
17	8.28	7.64	7.37	7.12	8.06	9.50	10.45	7.90	9.89	11.12	12.01	11.71
18	8.04	7.65	7.41	7.24	8.13	9.54	10.26	7.95	9.93	11.16	12.02	11.74
19	7.93	7.66	7.43	7.34	8.16	9.59	10.05	8.01	9.98	11.19	12.07	11.77
20	7.80	7.69	7.42	7.41	8.20	9.63	9.87	8.08	10.00	11.23	12.10	11.81
21	7.78	7.73	7.36	7.47	8.27	9.67	9.77	8.33	10.18	11.27	12.13	11.84
22	7.75	7.79	7.34	7.48	8.30	9.71	9.74	8.35	10.20	11.30	12.15	11.81
23	7.63	7.84	7.34	7.44	8.29	9.75	9.75	8.42	10.21	11.34	12.16	11.91
24	7.65	7.89	7.31	7.50	8.30	9.77	9.77	8.68	10.23	11.37	12.20	11.95
25	7.68	7.98	7.20	7.61	8.34	9.81	9.83	8.70	10.27	11.42	12.23	11.99
26	7.79	8.06	7.09	7.68	8.38	9.85	9.78	8.71	10.32	11.46	12.25	12.03
27	7.82	7.83	7.02	7.77	8.43	9.89	9.57	8.73	10.37	11.50	12.28	12.06
28	7.81	7.62	6.84	7.86	8.47	9.94	9.30	8.78	10.36	11.53	12.30	12.09
29	7.87	7.44	6.79	7.91	8.50	9.99	9.07	8.84	10.36	11.51	12.34	12.13
30	7.41	---	7.03	7.95	8.56	10.03	8.75	8.97	10.41	11.55	12.29	12.16
31	7.79	---	7.14	---	8.60	---	8.37	9.11	---	11.58	---	12.18
MEAN	8.14	7.95	7.20	7.30	8.02	9.38	10.00	7.91	9.81	11.07	11.98	11.89

CAL YR 1984 MEAN 9.22 HIGH 6.79 LOW 12.34

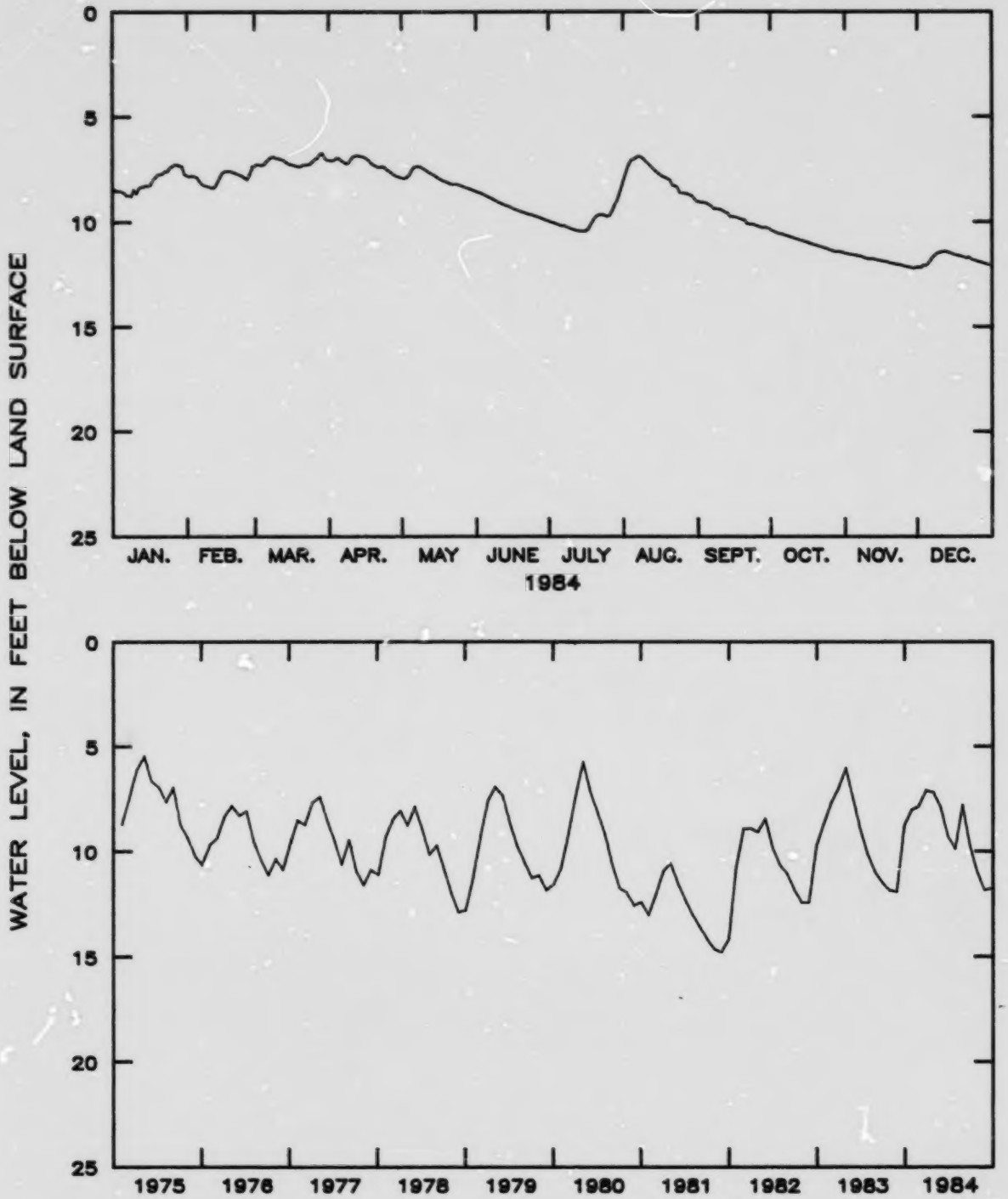

Figure 2.3–3.––Water level in observation well 12Z001, Lamar County.

35P094 UGA CHATHAM COUNTY

315950081161201 Local number, 35P094.
LOCATION.--Lat 31°59'50", long 81°16'12", Hydrologic Unit 03060204, Barbour Lathrop Plant Introduction Station, 10 miles south of Savannah, north of the intersection of U.S. Highway 17 and Argyle Rd.
Owner: University of Georgia, formerly U.S. Department of Agriculture.
AQUIFER.--Sands of Holocene and Pleistocene age.
WELL CHARACTERISTICS.--Bored observation well, diameter 30 in., depth 15 ft, cased to 15 ft, open end.
DATUM.--Altitude of land-surface datum is 18.67 ft.
Measuring point: Iron bracket on recorder shelter, 3.3 ft above land-surface datum.
REMARKS.--Responds quickly to precipitation. Water levels for periods of missing recorder record, January 21-31, September 23-27, and November 27, were estimated.
PERIOD OF RECORD.--August 1942 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 0.05 ft below land-surface datum, September 26, 1953; lowest, 12.28 ft below land-surface datum, November 30, 1972.

Water level, in feet below land surface, through calendar year 1984 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	5.73	2.30	2.88	3.09	4.06	4.39	6.64	6.20	7.95	7.88	9.12	9.36
2	5.79	2.44	3.00	3.19	4.14	4.52	6.61	6.04	8.02	7.65	9.14	9.33
3	5.83	2.52	3.11	3.19	3.91	4.66	6.61	5.94	8.09	7.52	9.16	9.31
4	5.95	2.50	3.20	3.07	3.43	4.82	6.66	5.90	7.96	7.49	9.18	9.31
5	6.02	2.60	3.19	3.17	3.37	4.98	6.76	5.96	7.63	7.53	9.20	9.27
6	6.10	2.76	1.90	3.29	3.51	5.11	6.89	6.06	7.41	7.59	9.22	9.24
7	6.23	2.88	.84	3.39	3.64	5.24	7.04	6.26	7.36	7.64	9.26	9.26
8	6.38	2.96	1.34	3.47	3.62	5.36	7.18	6.36	7.36	7.69	9.30	9.26
9	6.48	3.02	1.72	3.16	3.34	5.46	7.32	6.53	7.36	7.76	9.32	9.27
10	6.49	3.09	2.00	2.83	3.38	5.57	7.43	6.69	7.42	7.84	9.34	9.26
11	6.56	3.16	2.20	2.93	3.54	5.66	7.53	6.84	7.52	7.90	9.36	9.27
12	6.72	3.22	2.28	3.07	3.70	5.76	7.64	7.00	7.64	7.96	9.38	9.28
13	6.73	3.14	1.97	3.16	3.84	5.84	7.78	7.18	7.75	7.94	9.42	9.30
14	6.80	3.00	2.13	3.29	3.98	5.86	7.90	7.35	7.84	7.92	9.44	9.34
15	6.80	3.06	2.37	3.37	4.12	5.91	7.94	7.50	7.91	8.00	9.47	9.36
16	6.79	3.18	2.51	3.42	4.24	5.86	7.93	7.64	8.00	8.10	9.49	9.39
17	6.82	3.27	2.63	3.52	4.36	5.80	8.03	7.70	8.08	8.21	9.52	9.41
18	6.78	3.34	2.74	3.61	4.46	6.01	8.09	7.61	8.16	8.30	9.54	9.43
19	6.58	3.42	2.93	3.69	4.55	6.24	8.04	7.53	8.22	8.40	9.56	9.44
20	6.28	3.48	2.62	3.77	4.65	6.40	7.66	7.44	8.28	8.48	9.59	9.44
21	5.95	3.54	2.40	3.85	4.76	6.51	7.11	7.33	8.36	8.56	9.61	9.46
22	5.62	3.59	2.59	3.91	4.86	6.61	6.76	7.24	8.42	8.64	9.58	9.48
23	5.28	3.48	2.76	3.61	4.94	6.70	6.61	7.20	8.46	8.70	9.50	9.51
24	4.95	3.44	2.90	3.29	5.02	6.79	6.52	7.26	8.51	8.76	9.46	9.53
25	4.62	3.54	2.99	3.41	5.10	6.88	6.46	7.36	8.55	8.82	9.49	9.56
26	4.29	3.64	3.10	3.56	5.20	6.99	6.48	7.47	8.59	8.88	9.47	9.58
27	3.96	3.12	3.13	3.68	5.27	7.12	6.56	7.56	8.64	8.93	9.45	9.61
28	3.63	2.58	2.77	3.80	5.04	7.15	6.66	7.65	8.68	8.98	9.42	9.63
29	3.29	2.74	2.61	3.90	4.61	6.93	6.68	7.74	8.44	9.02	9.40	9.64
30	2.96	---	2.82	3.98	4.32	6.76	6.56	7.82	8.14	9.05	9.36	9.66
31	2.63	---	2.97	---	4.30	---	6.38	7.88	---	9.08	---	9.68
MEAN	5.45	3.07	2.53	3.42	4.23	5.93	7.11	7.04	8.03	8.23	9.39	9.42

CAL YR 1984 MEAN 6.18 HIGH .84 LOW 9.68

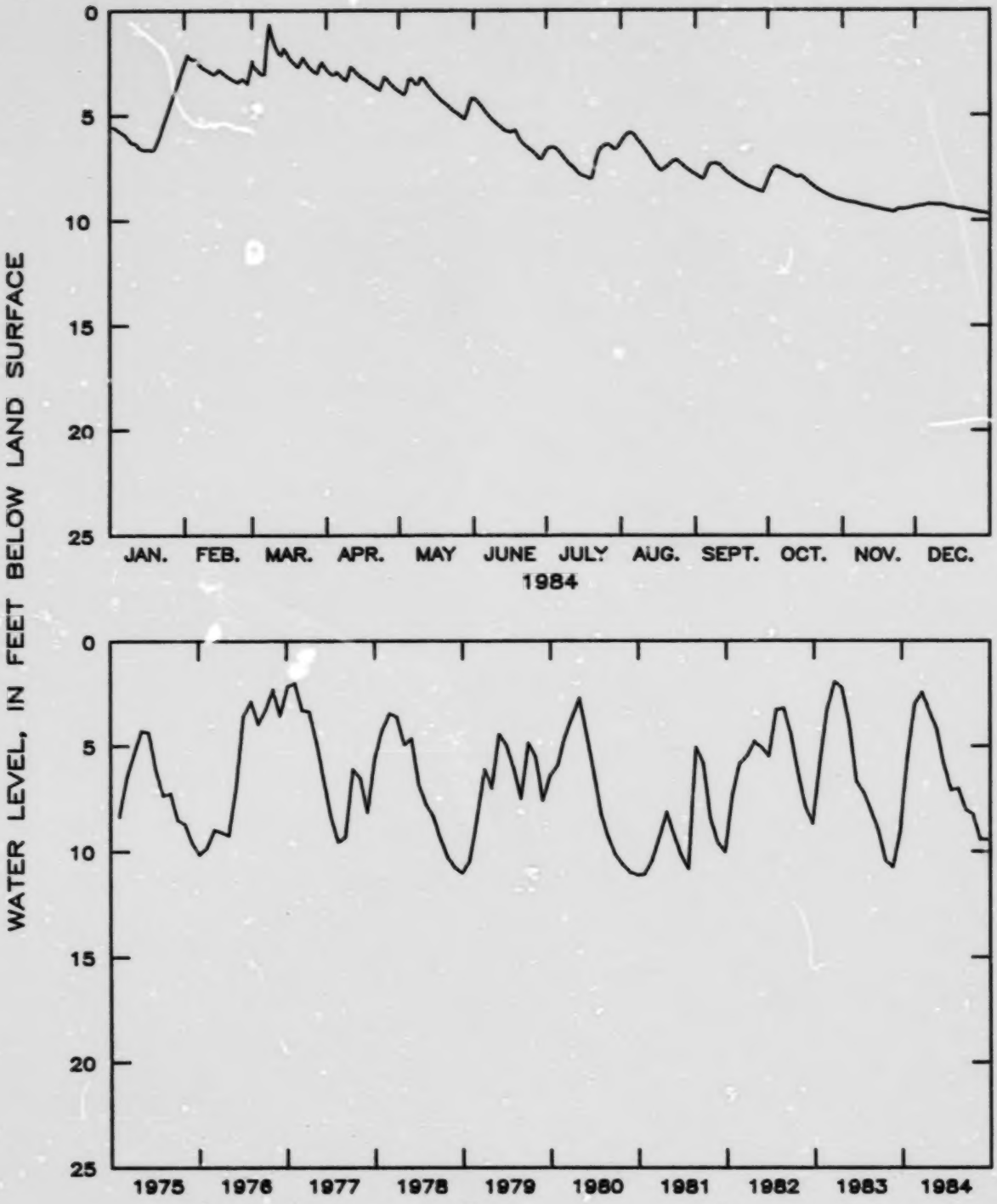

Figure 2.3–4.––Water level in observation well 35P094, Chatham County.

2.4 Cretaceous Aquifer System

The Cretaceous aquifer system in the Georgia Coastal Plain supplies more than 128 Mgal/d, primarily for municipal and industrial use. The aquifer system consists of sand and gravel that locally contains layers of clay and silt which act as confining beds. These confining beds locally separate the aquifer system into two or more aquifers. In east-central Georgia the Cretaceous aquifer system is divided into three subsystems: the Dublin aquifer system, the Midville aquifer system, and the Dublin-Midville aquifer system (Clarke and others, 1985). In southwestern Georgia, the Providence aquifer is part of the Cretaceous aquifer system.

Water-level fluctuations in the Cretaceous aquifer system are related primarily to changes in precipitation and pumping rates. In east-central Georgia, water-level declines of 10 to 50 feet occurred during 1946-80 in Twiggs County, northwestern Wilkinson County, and central Washington County, which are areas of heavy pumping associated with kaolin mining and processing (Clarke and others, 1985). Mean annual water levels in three wells in east-central Georgia were from 2 feet lower to 2.3 feet higher in 1984 than in 1983. Water levels at wells 18U001 and 30AA04 declined during 1975-81 and recovered from 1981 to 1984. The rise at well 30AA04 was in response to above-normal precipitation at Augusta, whereas the rise at well 18U001 was in response to a decrease in pumping in the Huber-Warner Robins area. A downward trend as a result of regional pumping continued at well 28X001 where the 1984 mean annual water level was 2 feet lower than in 1983 and a new record low was reached in December 1984.

In western Georgia, the mean annual water level at well 06S001 in Chattahoochee County was about 1.8 feet lower in 1984 than in 1983, continuing the downward trend in that area.

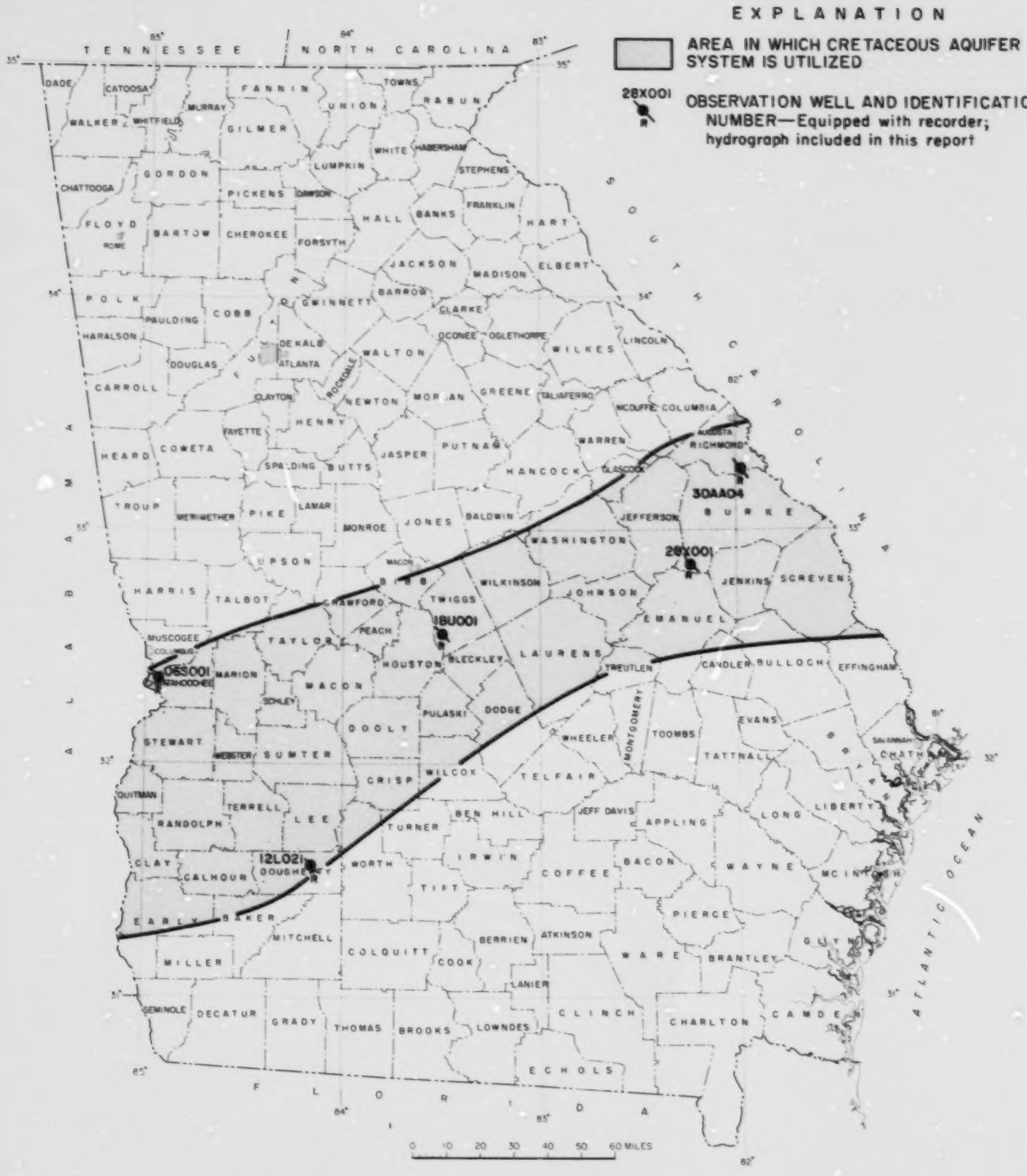

Figure 2.4-1.—Locations of observation wells in the Cretaceous aquifer system.

28X001 MIDVILLE EXPERIMENT STATION BURKE COUNTY

325232082131501 Local number, 28X001.
LOCATION.--Lat 32°52'32", long 82°13'15", Hydrologic Unit 03060201, 4.2 mi north of Midville off State Highway 56 at Southeastern Experiment Station.
Owner: U.S. Geological Survey.
AQUIFER.--Midville aquifer system.
WELL CHARACTERISTICS.--Drilled unused observation well, diameter 4 in., depth 1,045 ft, cased to 1,025 ft, screened.
DATUM.--Altitude of land-surface datum is 269 ft.
Measuring point: Floor of recorder platform, 3.04 ft above land-surface datum.
REMARKS.--Water levels for period of missing recorder record, September 22 to October 3, were estimated.
PERIOD OF RECORD.--June 1980 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 49.07 ft below land-surface datum, June 4, 1980; lowest, 55.33 ft below land-surface datum, December 26, 1984.

Water level, in feet below land surface, through calendar year 1984 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	53.89	53.66	53.50	53.42	53.40	53.30	53.46	53.75	54.07	54.56	55.00	55.14
2	53.86	53.68	53.48	53.44	53.35	53.29	53.53	53.72	54.12	54.57	54.95	55.18
3	53.83	53.59	53.49	53.37	53.25	53.28	53.55	53.70	54.12	54.59	54.94	55.16
4	53.78	53.50	53.52	53.24	53.20	53.29	53.56	53.70	54.10	54.61	54.92	55.24
5	53.70	53.51	53.42	53.19	53.28	53.33	53.54	53.71	54.14	54.64	54.91	55.17
6	53.66	53.58	53.32	53.25	53.35	53.38	53.54	53.71	54.20	54.69	55.00	55.14
7	53.70	53.67	53.37	53.30	53.36	53.41	53.53	53.72	54.26	54.70	55.07	55.22
8	53.78	53.74	53.43	53.35	53.34	53.42	53.54	53.71	54.30	54.70	55.11	55.19
9	53.82	53.74	53.46	53.32	53.36	53.43	53.58	53.74	54.24	54.70	55.08	55.16
10	53.70	53.71	53.50	53.26	53.38	53.43	53.59	53.77	54.19	54.71	55.01	55.13
11	53.68	53.70	53.50	53.27	53.40	53.45	53.53	53.77	54.19	54.72	54.97	55.11
12	53.81	53.68	53.51	53.30	53.40	53.46	53.58	53.81	54.22	54.72	55.04	55.10
13	53.86	53.56	53.48	53.28	53.39	53.47	53.62	53.83	54.25	54.68	55.10	55.14
14	53.86	53.50	53.48	53.23	53.38	53.45	53.68	53.87	54.26	54.65	55.14	55.20
15	53.84	53.55	53.52	53.23	53.42	53.48	53.71	53.90	54.28	54.66	55.14	55.24
16	53.78	53.56	53.48	53.22	53.44	53.50	53.70	53.91	54.34	54.72	55.10	55.24
17	53.78	53.56	53.47	53.24	53.48	53.51	53.68	53.90	54.40	54.78	55.10	55.22
18	53.73	53.56	53.46	53.29	53.50	53.49	53.66	53.88	54.42	54.78	55.08	55.21
19	53.70	53.55	53.43	53.34	53.47	53.48	53.66	53.89	54.38	54.78	55.04	55.18
20	53.78	53.55	53.33	53.35	53.44	53.47	53.67	53.92	54.35	54.81	55.16	55.16
21	53.82	53.51	53.30	53.37	53.44	53.47	53.68	53.98	54.38	54.83	55.25	55.16
22	53.85	53.48	53.38	53.32	53.43	53.45	53.70	54.02	54.40	54.85	55.24	55.18
23	53.82	53.42	53.44	53.24	53.36	53.44	53.74	53.97	54.42	54.87	55.20	55.22
24	53.70	53.45	53.45	53.26	53.36	53.44	53.79	53.95	54.43	54.92	55.16	55.22
25	53.70	53.49	53.36	53.32	53.38	53.43	53.80	54.02	54.45	54.93	55.17	55.26
26	53.62	53.54	53.32	53.36	53.38	53.43	53.80	54.06	54.47	54.92	55.19	55.33
27	53.56	53.40	53.30	53.37	53.42	53.46	53.80	54.06	54.49	54.92	55.16	55.30
28	53.50	53.32	53.13	53.38	53.38	53.48	53.79	54.05	54.50	54.92	55.11	55.28
29	53.54	53.43	53.16	53.40	53.32	53.45	53.78	54.05	54.52	54.91	55.11	55.27
30	53.52	---	53.34	53.39	53.27	53.43	53.78	54.04	54.54	54.92	55.11	55.26
31	53.62	---	53.41	---	53.30	---	53.77	54.03	---	54.96	---	55.26
MEAN	53.74	53.56	53.41	53.31	53.39	53.43	53.66	53.88	54.25	54.77	55.09	55.20

CAL YR 1984 MEAN 53.97 HIGH 53.13 LOW 55.33

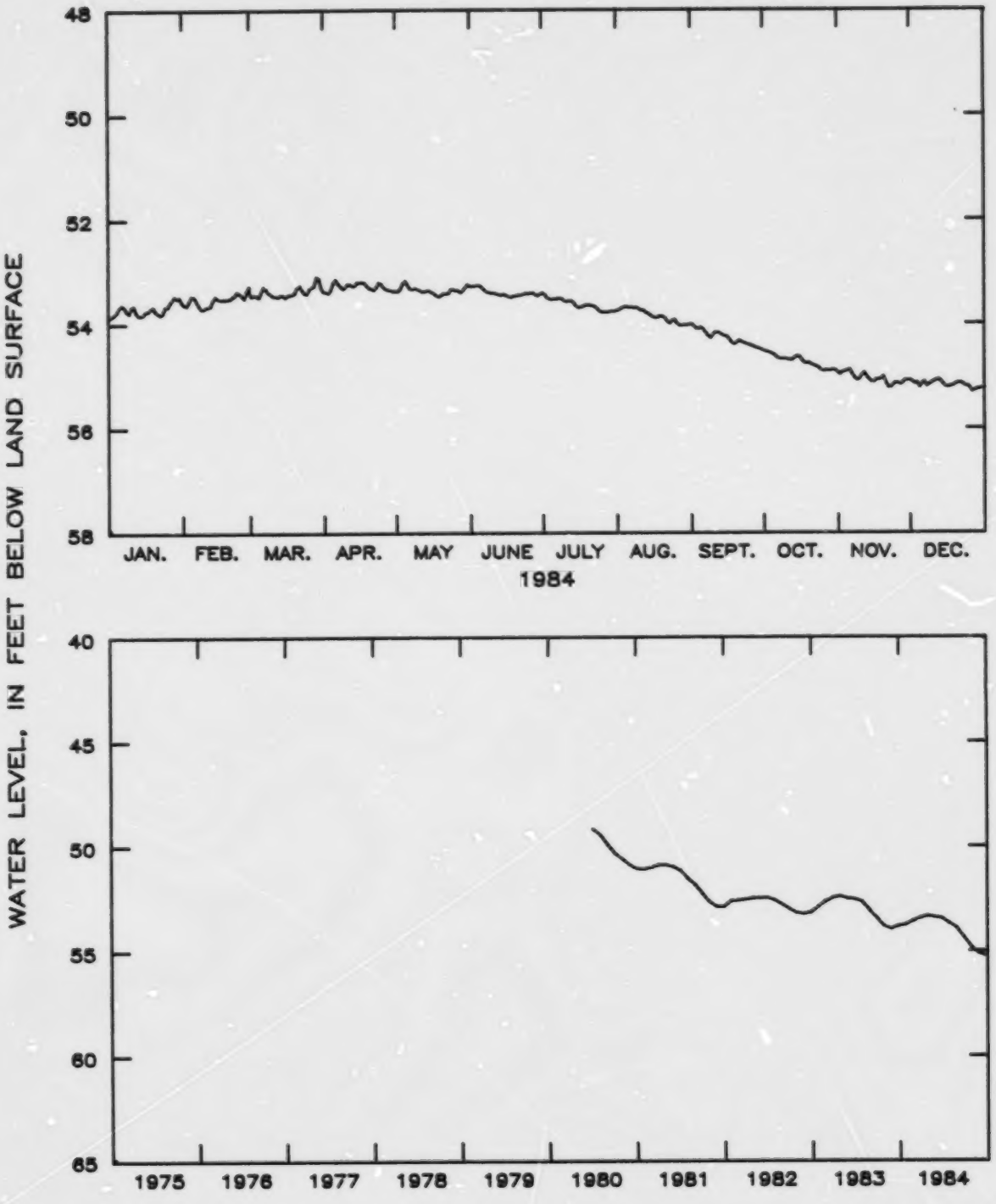

Figure 2.4–2.––Water level in observation well 28X001, Burke County.

18U001 TEST WELL 3 TWIGGS COUNTY

323302083263401 Local number, 18U001.
LOCATION.--Lat 32°33'02", long 83°26'34", Hydrologic Unit 03070104, 0.6 miles north of intersection of U.S. Highways 23 and 12 and Georgia Highway 96, turn left at Woods Road West. Well is 100 ft west of highway.
Owner: Georgia Kraft, USGS TW 3.
AQUIFER.--Dublin aquifer system.
WELL CHARACTERISTICS.--Drilled observation well, diameter 6 in., depth 590 ft; 3 in., depth 586-616 ft, cased to 616 ft.
DATUM.--Altitude of land-surface datum is 420 ft.
Measuring point: Top of recorder shelter, 2.6 ft above land-surface datum.
REMARKS.--Borehole geophysical survey conducted.
PERIOD OF RECORD.--July 1975 to current year. Water levels for periods of missing recorder record, January 1-8 and November 21 to December 12, were estimated.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 162.00 ft below land-surface datum, April 4, 1977; lowest, 165.64 ft below land-surface datum, October 5, 1981.

Water level, in feet below land surface, through calendar year 1984 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	163.38	163.00	163.00	162.88	162.93	163.12	163.75	163.43	163.52	163.83	163.73	163.68
2	163.34	163.03	162.94	162.89	162.88	163.11	163.78	163.36	163.55	163.77	163.69	163.67
3	163.27	162.92	162.91	162.81	162.78	163.10	163.80	163.25	163.62	163.78	163.72	163.67
4	163.19	162.86	162.91	162.71	162.76	163.10	163.78	163.15	163.62	163.78	163.76	163.66
5	163.12	162.88	162.80	162.70	162.86	163.12	163.75	163.02	163.63	163.77	163.76	163.65
6	163.07	162.99	162.75	162.76	162.90	163.16	163.75	163.02	163.65	163.74	163.71	163.65
7	163.13	163.10	162.84	162.80	162.93	163.20	163.75	162.98	163.70	163.73	163.65	163.64
8	163.21	163.16	162.92	162.86	162.85	163.24	163.75	162.98	163.74	163.74	163.63	163.63
9	163.25	163.15	162.94	162.78	162.85	163.26	163.77	163.02	163.77	163.77	163.68	163.63
10	163.08	163.13	162.95	162.79	162.86	163.29	163.80	163.05	163.74	163.76	163.75	163.62
11	163.10	163.10	162.90	162.82	162.86	163.34	163.78	163.06	163.70	163.75	163.81	163.61
12	163.24	163.07	162.91	162.84	162.91	163.38	163.75	163.10	163.70	163.76	163.78	163.61
13	163.28	163.00	162.90	162.82	162.95	163.42	163.73	163.14	163.71	163.83	163.71	163.60
14	163.27	163.00	162.96	162.76	162.95	163.43	163.77	163.18	163.75	163.85	163.69	163.54
15	163.23	163.05	162.99	162.74	162.97	163.46	163.80	163.22	163.75	163.85	163.70	163.53
16	163.14	163.05	162.95	162.73	163.03	163.51	163.76	163.25	163.75	163.80	163.74	163.54
17	163.13	163.02	162.95	162.76	163.10	163.55	163.74	163.24	163.80	163.76	163.75	163.55
18	163.07	162.97	162.93	162.84	163.14	163.55	163.73	163.23	163.87	163.76	163.82	163.55
19	163.07	162.93	162.91	162.88	163.14	163.56	163.73	163.24	163.87	163.76	163.87	163.57
20	163.15	162.90	162.82	162.90	163.14	163.59	163.71	163.26	163.84	163.77	163.75	163.57
21	163.18	162.90	162.75	162.90	163.20	163.64	163.67	163.34	163.80	163.77	163.75	163.57
22	163.23	162.90	162.86	162.86	163.24	163.65	163.65	163.40	163.81	163.75	163.74	163.58
23	163.15	162.86	162.84	162.73	163.25	163.66	163.66	163.34	163.86	163.74	163.74	163.51
24	162.98	162.91	162.93	162.76	163.26	163.70	163.67	163.35	163.91	163.73	163.73	163.52
25	162.90	162.95	162.80	162.84	163.27	163.69	163.66	163.42	163.92	163.71	163.72	163.53
26	162.94	163.00	162.80	162.85	163.26	163.69	163.65	163.47	163.90	163.73	163.72	163.54
27	162.87	162.81	162.73	162.85	163.26	163.69	163.63	163.50	163.89	163.75	163.71	163.55
28	162.86	162.81	162.52	162.88	163.23	163.72	163.64	163.50	163.90	163.76	163.70	163.56
29	162.90	162.93	162.61	162.90	163.12	163.72	163.60	163.51	163.86	163.76	163.69	163.58
30	162.89	---	162.79	162.91	163.12	163.70	163.53	163.51	163.85	163.76	163.69	163.30
31	162.97	---	162.87	---	163.12	---	163.45	---	163.52	163.75	---	163.62
MEAN	163.12	162.98	162.86	162.82	163.04	163.45	163.71	163.25	163.76	163.77	163.73	163.58

CAL YR 1984 MEAN 163.34 HIGH 162.52 LOW 163.92

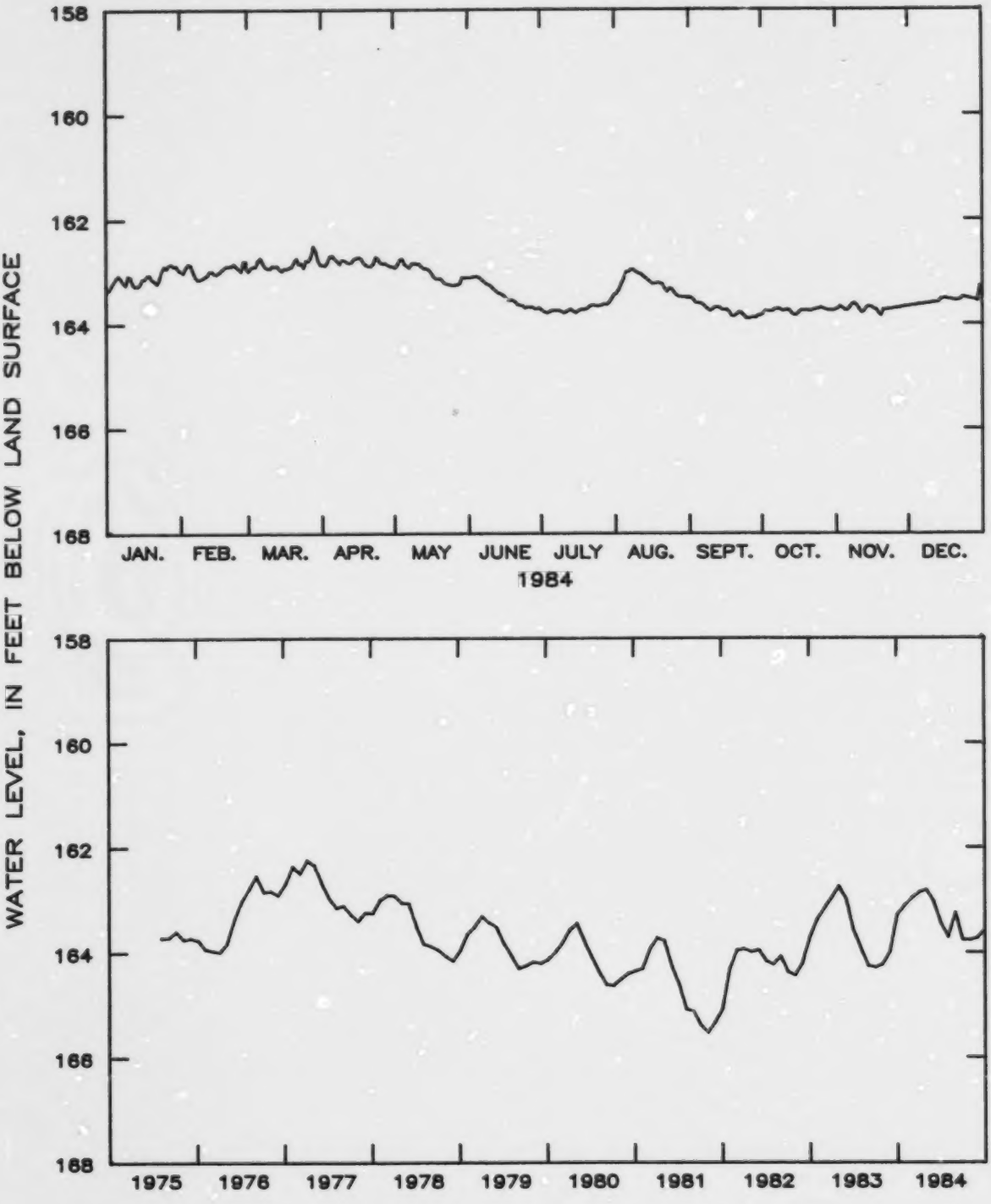

Figure 2.4–3.––Water level in observation well 18U001, Twiggs County.

06S001 FORT BENNING CHATTAHOOCHEE COUNTY

322036084590301 Local number, 06S001
LOCATION.--Lat 32°20'31", long 84°59'11", Hydrologic Unit 03130003, in "Motor Pool" across road from Lawson Airfield main building.
Owner: U.S. Army.
AQUIFER.--Blufftown and Eutaw Formations, and Tuscaloosa Formation.
WELL CHARACTERISTICS.--Drilled unused supply well, diameter 12 in., depth 568 ft, screened interval 215-220 ft, 230-235 ft, 280-290 ft, 540-550 ft.
DATUM.--Altitude of land-surface datum is 255 ft.
Measuring point: Floor of recorder shelter, 2.80 ft above land-surface datum.
REMARKS.--Well pumped June 1978; water-quality sample collected at conclusion of pumping.
PERIOD OF RECORD.--May 1950 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 0.37 ft below land-surface datum, April 10, 1964; lowest, 29.73 ft below land-surface datum, September 10, 1958.

Water level, in feet below land surface, monthly mean values through 1975 and 1984 - periodic measurements, 1975-79

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	17.24	17.23	17.36	17.40	17.70	18.00	18.32	18.39	18.57	18.92	19.20	19.30
2	17.24	17.24	17.37	17.42	17.70	18.01	18.34	18.36	18.61	18.97	19.21	19.31
3	17.23	17.23	17.37	17.41	17.61	18.01	18.35	18.30	18.62	18.98	19.21	19.31
4	17.22	17.20	17.37	17.37	17.57	18.02	18.36	18.29	18.63	19.00	19.21	19.30
5	17.19	17.19	17.35	17.39	17.58	18.03	18.36	18.29	18.65	19.00	19.21	19.25
6	17.16	17.22	17.33	17.40	17.59	18.05	18.37	18.30	18.68	19.02	19.21	19.22
7	17.17	17.25	17.33	17.42	17.61	18.08	18.38	18.34	18.71	19.04	19.23	19.25
8	17.20	17.32	17.33	17.43	17.63	18.10	18.41	18.36	18.73	19.05	19.27	19.25
9	17.23	17.33	17.34	17.43	17.65	18.11	18.44	18.35	18.73	19.05	19.29	19.24
10	17.20	17.33	17.36	17.42	17.67	18.12	18.45	18.34	18.73	19.05	19.31	19.23
11	17.18	17.33	17.36	17.43	17.70	18.14	18.46	18.35	18.73	19.07	19.27	19.22
12	17.21	17.33	17.36	17.45	17.74	18.16	18.47	18.35	18.73	19.07	19.24	19.22
13	17.24	17.31	17.37	17.46	17.77	18.17	18.48	18.36	18.73	19.06	19.25	19.22
14	17.25	17.29	17.39	17.46	17.78	18.18	18.50	18.40	18.73	19.06	19.30	19.25
15	17.25	17.30	17.41	17.46	17.79	18.19	18.51	18.41	18.73	19.05	19.33	19.29
16	17.24	17.29	17.43	17.45	17.83	18.22	18.51	18.41	18.75	19.05	19.33	19.30
17	17.23	17.29	17.43	17.48	17.87	18.23	18.51	18.41	18.77	19.07	19.33	19.30
18	17.23	17.36	17.43	17.49	17.89	18.23	18.50	18.41	18.81	19.08	19.32	19.31
19	17.23	17.30	17.43	17.53	17.89	18.24	18.50	18.41	18.81	19.08	19.30	19.31
20	17.23	17.30	17.40	17.55	17.90	18.25	18.50	18.41	18.81	19.08	19.32	19.32
21	17.23	17.30	17.37	17.57	17.90	18.26	18.50	18.43	18.81	19.09	19.36	19.32
22	17.24	17.30	17.38	17.57	17.90	18.26	18.51	18.48	18.84	19.11	19.39	19.32
23	17.24	17.30	17.39	17.56	17.90	18.26	18.51	18.49	18.87	19.12	19.36	19.35
24	17.20	17.31	17.40	17.57	17.90	18.26	18.51	18.48	18.89	19.15	19.39	19.36
25	17.16	17.34	17.39	17.60	17.90	18.27	18.51	18.50	18.97	19.18	19.34	19.39
26	17.16	17.36	17.37	17.62	17.92	18.29	18.50	18.54	18.87	19.18	19.39	19.43
27	17.15	17.32	17.33	17.65	17.94	18.32	18.48	18.55	18.87	19.18	19.38	19.45
28	17.14	17.24	17.26	17.68	17.94	18.33	18.48	18.55	18.86	19.18	19.36	19.46
29	17.15	17.31	17.28	17.67	17.94	18.32	18.48	18.55	18.87	19.18	19.32	19.46
30	17.19	---	17.34	17.67	17.95	18.31	18.48	18.55	18.88	19.18	19.31	19.47
31	17.22	---	17.37	---	17.97	---	18.41	18.55	---	19.18	---	19.47
MEAN	17.21	17.29	17.37	17.50	17.79	18.18	18.45	18.42	18.76	19.08	19.30	19.32

CAL YR 1984 MEAN 18.23 HIGH 17.14 LOW 19.47

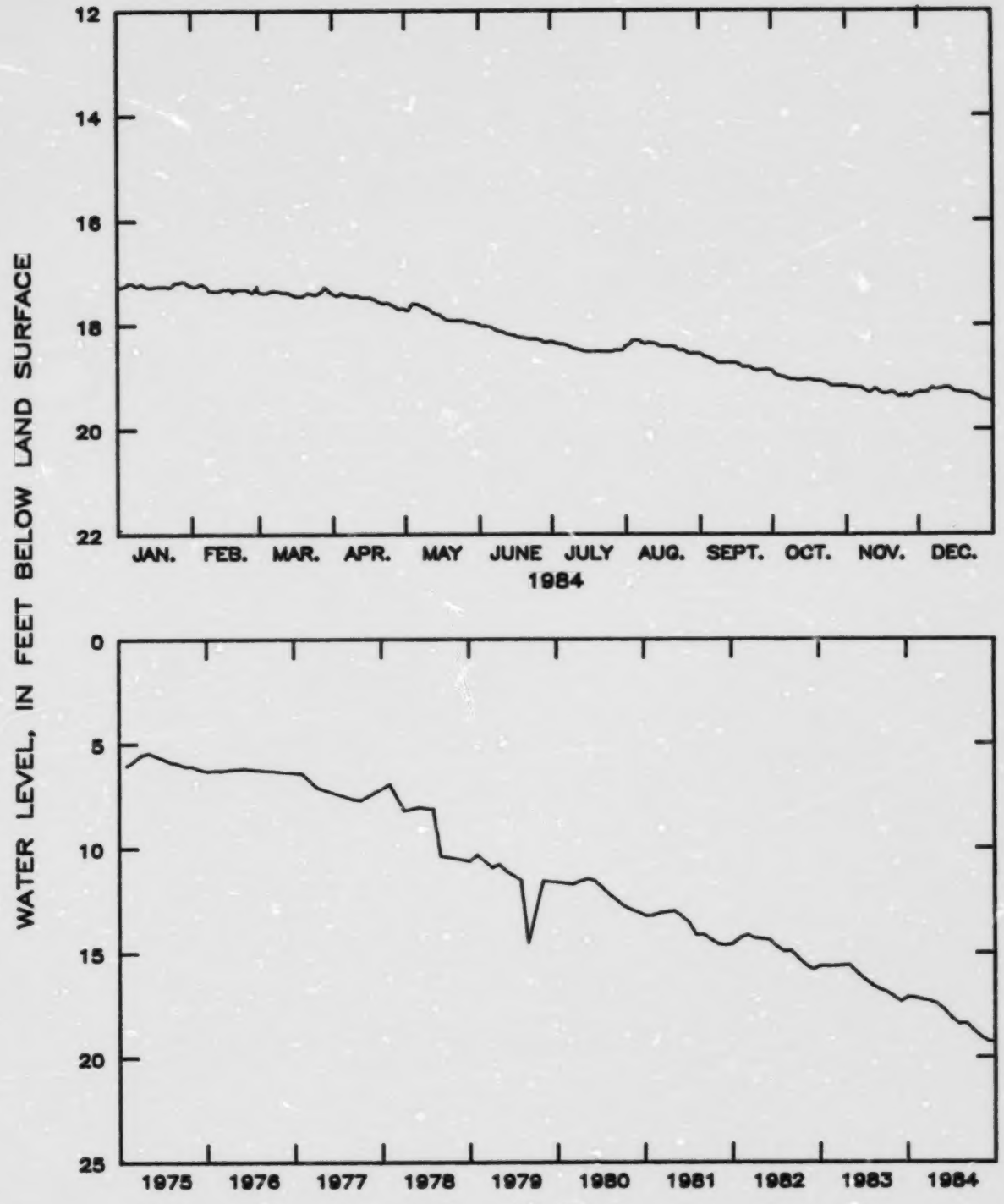

Figure 2.4–4.––Water level in observation well 06S001, Chattahoochee County.

30AA04 MCBEAN 2 RICHMOND COUNTY

331711081573701 Local number, 30AA04.
LOCATION.--lat 33°15'25", long 81°57'47", Hydrologic Unit 03060106, go 1.5 mi north of McBean on State Highway 56 to 3rd road on left, go 0.41 mi to 1st road on left. Recorder is at end of road.
Owner: Richmond County water system.
AQUIFER.--Dublin-Midville aquifer system.
WELL CHARACTERISTICS.--Drilled unused municipal well, diameter 6 in., depth 496 ft, cased to 174 ft, screened.
DATUM.--Altitude of land-surface datum is 293 ft.
Measuring point: Top of 6-in. casing, 1.5 ft above land-surface datum.
REMARKS.--Borehole geophysical survey conducted October 23, 1967. Water-quality sample collected November 26, 1967. Water levels for period of missing recorder record, February 27 to April 9, were estimated.
PERIOD OF RECORD.--June 1979 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 116.70 ft below land-surface datum, May 30, 1984; lowest, 121.97 ft below land-surface datum, June 23, 1981.

Water level, in feet below land surface, through calendar year 1984 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	119.02	118.92	118.45	117.93	117.14	116.74	117.16	116.80	117.36	117.20	117.38	117.31
2	119.02	118.93	118.43	117.91	117.14	116.80	117.14	116.75	117.22	117.14	117.34	117.34
3	119.02	118.92	118.42	117.89	117.01	117.12	117.14	116.74	117.20	117.09	117.30	117.36
4	119.01	118.89	118.40	117.88	116.89	117.44	117.12	116.74	117.48	117.19	117.24	117.38
5	118.98	118.84	118.38	117.86	116.92	117.52	117.10	116.74	117.62	117.30	117.21	117.36
6	118.96	118.84	118.36	117.84	116.95	117.36	117.13	116.75	117.64	117.70	117.22	117.32
7	118.95	118.88	118.35	117.83	116.96	117.44	117.09	116.83	117.78	117.81	117.26	117.33
8	118.98	118.90	118.33	117.81	116.98	117.70	117.07	117.22	117.76	117.51	117.27	117.35
9	119.00	118.91	118.31	117.79	116.99	117.94	117.18	117.48	117.60	117.76	117.28	117.35
10	118.90	118.91	118.30	117.76	116.99	117.78	117.38	117.62	117.37	117.96	117.26	117.35
11	118.94	118.90	118.28	117.43	116.99	117.53	117.38	117.42	117.35	118.13	117.23	117.34
12	118.98	118.88	118.26	117.55	117.12	117.64	117.53	117.18	117.50	117.82	117.24	117.35
13	119.01	118.76	118.25	117.51	117.22	117.89	117.58	117.04	117.78	117.85	117.27	117.36
14	119.01	118.63	118.23	117.44	117.34	117.82	117.60	116.98	118.01	117.76	117.32	117.38
15	119.01	118.62	118.21	117.36	117.48	117.56	117.98	116.98	118.30	117.48	117.33	117.41
16	119.01	118.63	118.20	117.32	117.56	117.75	117.95	116.99	118.28	117.36	117.32	117.44
17	119.01	118.63	118.18	117.30	117.23	118.24	117.80	117.12	117.85	117.28	117.32	117.50
18	118.97	118.63	118.16	117.31	117.22	118.08	118.04	117.36	117.64	117.28	117.30	117.55
19	118.96	118.63	118.15	117.32	117.28	117.99	117.84	117.36	117.52	117.51	117.28	117.54
20	118.97	118.62	118.13	117.30	117.40	118.31	117.54	117.16	117.44	117.72	117.30	117.52
21	118.94	118.61	118.11	117.27	117.52	118.64	117.37	117.08	117.41	117.64	117.35	117.51
22	119.00	118.57	118.10	117.22	117.60	118.25	117.24	117.00	117.91	117.53	117.36	117.54
23	119.01	118.51	118.08	117.16	117.44	117.82	117.17	116.90	118.42	117.58	117.36	117.61
24	118.98	118.50	118.06	117.13	117.28	117.51	117.15	116.95	118.02	117.64	117.34	117.66
25	118.92	118.50	118.04	117.15	117.19	117.30	117.14	116.85	117.69	117.54	117.33	117.68
26	118.91	118.50	118.03	117.17	117.11	117.24	117.09	116.84	117.85	117.82	117.34	117.70
27	118.88	118.49	118.01	117.17	116.99	117.50	117.05	116.81	118.15	117.98	117.33	117.70
28	118.83	118.48	118.00	117.16	116.88	117.50	117.02	116.84	117.92	117.70	117.31	117.68
29	118.83	118.47	117.98	117.15	116.75	117.34	116.98	117.12	117.57	117.55	117.30	117.62
30	118.87	---	117.96	117.14	116.70	117.22	116.90	117.26	117.32	117.48	117.30	117.60
31	118.88	---	117.94	---	116.71	---	116.96	117.42	---	117.44	---	117.62
MEAN	118.96	118.71	118.20	117.48	117.12	117.63	117.31	117.04	117.70	117.57	117.30	117.48

CAL YR 1984 MEAN 117.70 HIGH 116.70 LOW 119.02

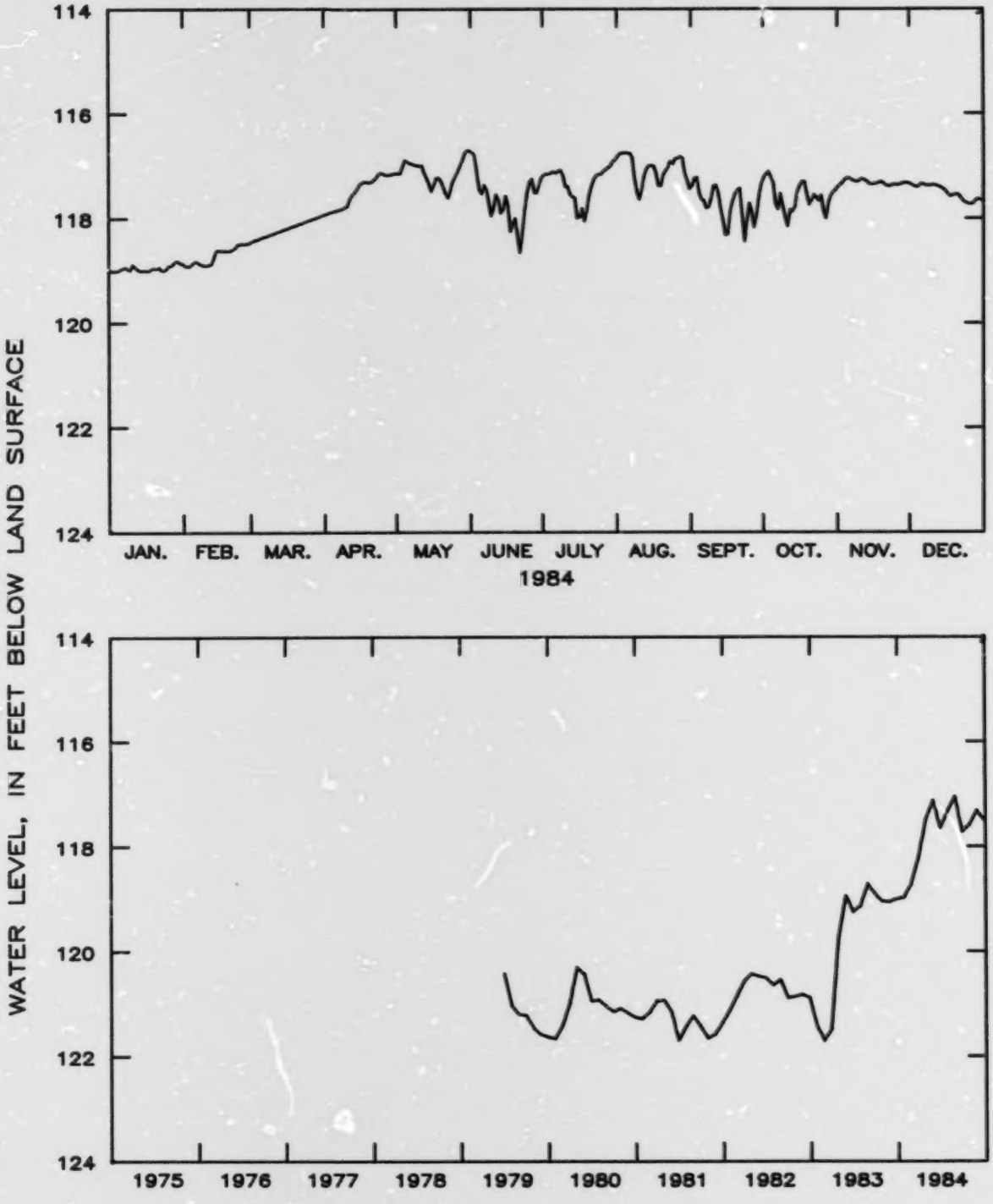

Figure 2.4—5.—Water level in observation well 30AA04, Richmond County.

2.4.1 Providence Aquifer

The Providence aquifer consists of sand of Late Cretaceous age and supplies about 9 Mgal/d for municipal, industrial, and agricultural users in southwestern Georgia (Clarke and others, 1983). Water levels in the Providence aquifer are affected primarily by changes in local pumping. According to Clarke and others (1983), water levels in the aquifer near Albany declined more than 100 feet during the period 1950-80. From 1978-81, the mean annual water level at well 12L021 declined about 16 feet. The mean annual water level recovered about 12 feet from 1981-84, reversing the downward trend. A new record high was reached at well 12L021 in April 1984. The 1981-84 recovery was the result of changing pumping patterns in the Albany area.

Figure 2.4.1-1.—Location of observation well 12L021 and the water level in the Providence aquifer, October 1984.

12L021 TEST WELL 10 DOUGHERTY COUNTY

313534084103003 Local number, 12L021.
LOCATION.--Lat 31°35'34", long 84°10'30", Hydrologic Unit 03130008, located in park at intersection of Slappey Drive and Fifth Avenue.
Owner: U.S. Geological Survey, test well 10.
AQUIFER.--Providence (Upper Cretaceous).
WELL CHARACTERISTICS.--Drilled unused observation well, depth 1,346 ft, cased to 797 ft.
DATUM.--Altitude of land-surface datum is 198 ft.
Measuring point: Floor of recorder shelter, 3.0 ft above land-surface datum.
REMARKS.--Water levels for periods of missing recorder record, January 18-19, July 29-31, and August 25-27, were estimated.
PERIOD OF RECORD.--December 1978 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 101.59 ft below land-surface datum, April 26, 1984; lowest, 144.99 ft below land-surface datum, August 11, 1981.

Water level, in feet below land surface, through calendar year 1984 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	126.37	121.63	111.20	103.27	102.96	107.72	119.17	122.31	129.75	137.20	138.40	138.53
2	126.44	121.71	110.65	103.36	102.78	107.65	119.28	122.39	130.28	137.63	137.47	138.02
3	125.96	121.72	109.97	103.50	102.44	107.93	119.28	122.49	130.89	138.13	137.00	137.87
4	124.74	122.07	109.32	103.20	102.50	108.18	119.83	122.42	131.13	138.65	136.62	138.15
5	123.52	122.35	108.62	103.06	103.06	108.05	120.33	122.76	131.40	139.12	136.09	138.35
6	123.58	122.50	107.90	103.12	103.40	108.00	120.83	123.75	131.70	139.49	135.21	138.58
7	123.85	122.54	107.54	103.04	103.42	108.00	120.93	124.49	131.82	139.78	134.57	138.78
8	123.93	122.50	107.20	103.00	103.30	108.07	120.36	124.90	132.05	140.08	135.00	138.76
9	123.98	122.33	106.92	103.04	103.30	108.07	119.89	125.15	132.18	140.40	135.40	138.77
10	123.80	121.66	106.42	102.81	103.36	108.38	119.70	125.22	132.53	140.75	135.48	138.72
11	123.52	120.83	105.97	102.85	103.57	108.73	119.87	125.05	132.20	141.08	135.35	138.66
12	122.75	120.82	105.58	102.88	103.60	109.53	120.45	125.10	132.63	141.35	135.64	138.60
13	122.83	121.59	105.25	102.69	103.65	110.64	120.87	125.33	132.80	141.62	135.84	138.59
14	123.05	122.34	105.01	102.50	103.62	111.28	120.50	125.41	133.17	141.83	136.00	138.65
15	123.04	123.02	104.78	102.63	103.65	111.62	119.98	125.74	133.42	141.92	136.09	138.72
16	123.43	122.60	104.50	102.46	103.77	111.92	120.66	125.70	133.32	141.11	135.95	138.78
17	124.02	121.34	104.22	102.29	104.52	112.27	120.75	125.43	133.81	139.92	136.04	138.83
18	124.09	120.07	103.98	102.45	105.41	113.45	120.29	125.35	134.20	139.45	136.50	138.77
19	124.15	118.68	103.80	102.43	106.02	114.80	119.80	125.82	134.52	139.58	137.04	138.62
20	124.22	117.45	103.59	102.48	106.64	115.83	119.63	126.61	134.75	139.38	137.62	138.45
21	124.42	116.33	103.50	102.60	106.88	115.60	119.86	127.41	135.00	139.35	138.02	138.33
22	124.77	115.50	103.55	102.33	106.97	115.70	120.82	127.37	135.32	139.78	138.42	138.21
23	124.89	114.78	103.42	102.00	107.02	115.79	121.00	127.52	135.20	140.12	138.55	138.09
24	124.37	114.05	103.27	101.93	107.10	115.80	121.48	127.62	135.65	140.18	138.43	137.48
25	124.04	113.57	103.72	101.77	107.29	115.80	121.70	127.56	135.92	140.10	138.47	136.49
26	124.23	113.15	103.17	101.59	107.57	116.35	121.95	127.50	135.70	140.23	138.16	136.25
27	124.00	112.74	103.05	101.68	107.85	117.55	122.25	127.48	136.00	140.67	137.78	136.00
28	123.05	112.28	103.05	102.17	106.00	118.00	122.57	127.39	136.43	140.37	138.09	135.92
29	122.63	111.73	103.23	102.52	108.07	118.74	122.50	127.85	136.78	140.05	138.40	135.70
30	122.00	---	103.32	102.72	108.03	119.50	122.44	128.52	137.00	139.97	138.64	135.55
31	121.90	---	103.37	---	107.94	---	122.34	129.17	---	139.22	---	135.71
MEAN	123.92	119.10	105.45	102.61	105.08	112.32	120.69	125.70	133.59	139.95	136.88	137.90

CAL YR 1984 MEAN 121.95 HIGH 101.59 LOW 141.92

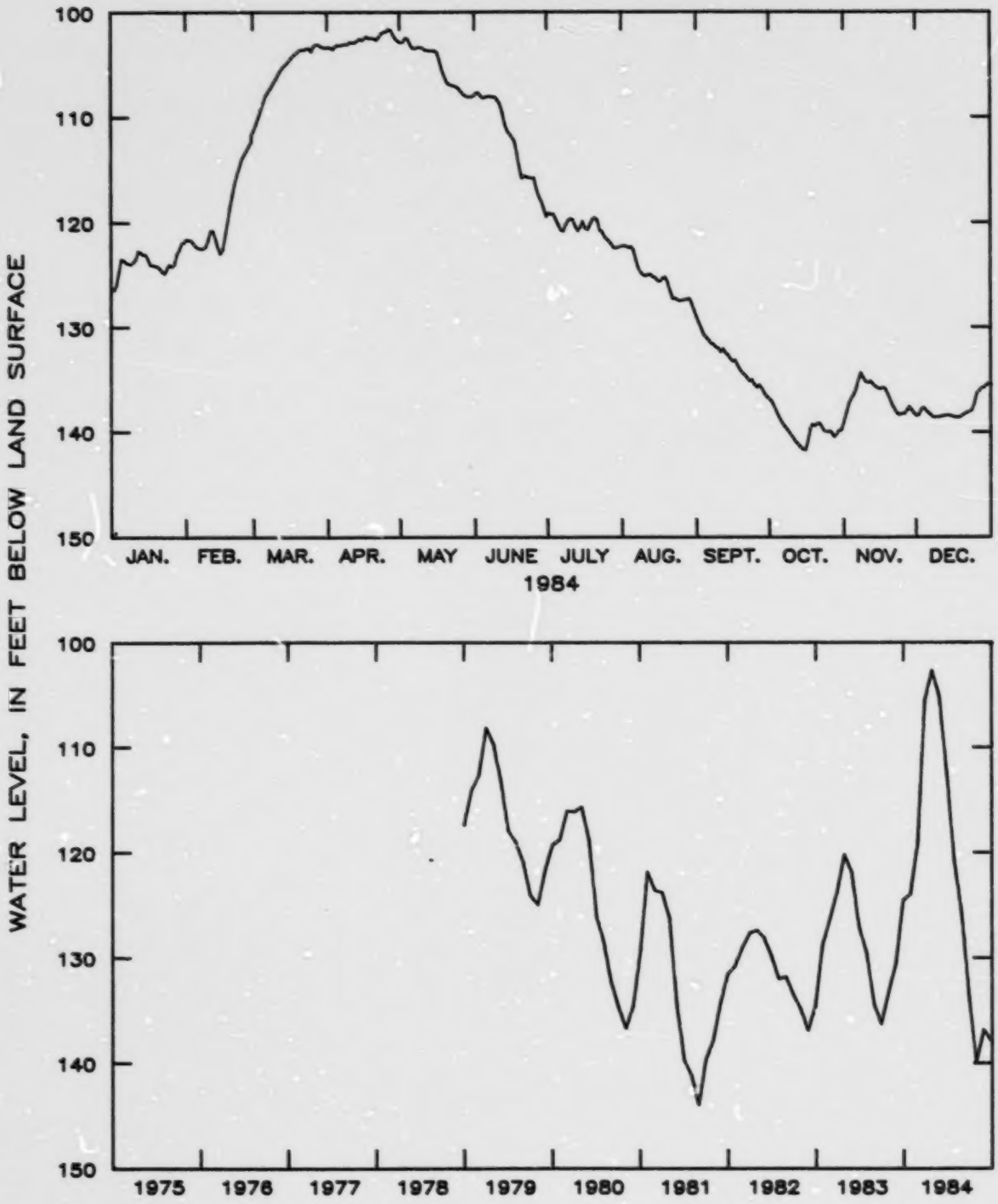

Figure 2.4.1–2––Water level in observation well 12L021, Dougherty County.

2.5 Clayton Aquifer

The Clayton aquifer consists of limestone and sand and supplies more than 20 Mgal/d for municipal and agricultural use in the area between the Chattahoochee and Flint Rivers in southwestern Georgia (Clarke and others, 1984). Water levels in the aquifer are affected primarily by changes in local and regional pumping.

Water levels in the Clayton aquifer north of Albany, Dougherty County, declined as much as 100 feet during 1954-81, with most of the decline occurring from 1977 to 1981 (Clarke and others, 1984). The accelerated rate of decline during 1977-81 corresponded to an increase in seasonal irrigation pumping. Above-normal precipitation during 1982-83 resulted in reduced irrigation pumping and water levels recovered as much as 11 feet from the drought of 1981. During 1984, mean annual water levels were as much as 2.5 feet lower than in 1983. A new record low was reached at well 07N001 in June 1984. The 1984 decline was in response to increased irrigation pumping as a result of below-normal precipitation.

Figure 2.5-1.—Observation well locations and the water level in the Clayton aquifer, October 1984.

05L001 W. F. GEORGE DAM CLAY COUNTY

313637085032601 Local number, 05L001.
LOCATION.--Lat 31°36'37", long 85°03'26", Hydrologic Unit 03130004, between Chattahoochee River and Fort Gaines waterplant.
Owner: U.S. Army Corps of Engineers.
AQUIFER.--Clayton.
WELL CHARACTERISTICS.--Drilled observation well, diameter 3 in., depth 120 ft, cased to 44 ft, open hole.
DATUM.--Altitude of land-surface datum is 146.7 ft.
Measuring point: Top of floor of recorder shelter, 2.7 ft above land-surface datum.
REMARKS.--Water level affected by changing river stage at lock and dam.
PERIOD OF RECORD.--May 23, 1957, to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 18.86 ft below land-surface datum, February 17, 1966; lowest, 35.95 ft below land-surface datum, February 14, 1961.

Water level, in feet below land surface, calendar year 1984 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	26.17	28.24	27.13	28.01	27.74	28.52	30.57	29.15	30.32	28.70	31.30	31.91
2	26.10	28.28	27.07	27.21	27.65	29.27	30.36	27.77	30.40	28.60	31.28	32.10
3	22.01	28.25	28.34	26.94	27.05	29.52	30.34	27.25	30.43	28.70	31.60	31.75
4	27.99	29.27	28.52	26.91	26.07	28.98	30.36	28.05	30.49	28.72	31.75	31.59
5	27.97	28.49	27.73	27.21	26.79	28.58	30.36	28.08	30.12	28.73	31.49	31.43
6	27.96	28.46	26.88	27.23	26.82	29.03	30.38	28.69	30.03	29.08	31.42	31.21
7	28.96	28.42	26.90	27.92	26.21	29.13	30.66	28.79	30.06	29.21	31.43	31.28
8	29.30	28.42	26.68	28.00	26.65	29.15	30.79	28.83	30.41	28.89	31.44	31.52
9	28.52	28.36	26.46	27.70	26.09	29.67	30.56	28.94	30.47	28.79	31.42	31.87
10	28.09	28.75	27.30	26.09	26.01	29.86	29.97	29.11	30.46	28.93	31.70	31.69
11	26.36	28.58	27.98	27.97	26.57	29.67	29.69	29.98	30.49	28.96	31.87	31.65
12	28.40	28.57	27.41	28.05	27.19	29.48	29.70	30.12	30.29	28.99	31.58	31.52
13	22.46	27.97	27.27	28.03	27.28	29.30	29.73	29.66	30.29	29.22	31.50	31.30
14	28.54	28.08	27.27	26.01	26.93	29.29	30.08	29.88	29.72	29.31	31.50	31.29
15	29.00	28.22	27.23	27.92	26.93	29.35	30.19	29.91	28.55	30.33	31.49	31.80
16	28.25	27.89	27.17	27.90	27.00	29.92	29.91	29.77	28.73	31.29	31.46	31.94
17	28.04	27.96	26.74	27.96	27.35	30.09	29.93	29.82	28.11	31.20	31.82	31.42
18	27.95	27.84	28.58	28.00	27.43	29.69	29.77	30.23	28.05	31.15	31.93	31.26
19	27.94	28.13	27.67	28.01	27.95	29.76	29.48	29.76	28.03	31.16	31.78	31.22
20	27.98	28.15	27.32	28.04	28.14	29.77	29.49	29.38	28.01	31.50	31.69	31.19
21	28.53	28.07	26.71	28.17	27.87	29.86	29.72	29.74	28.02	31.66	31.55	31.16
22	28.93	27.73	27.34	28.42	27.62	29.98	30.11	30.12	28.62	31.27	31.59	31.72
23	28.34	27.67	27.39	28.08	27.93	30.23	29.76	29.60	28.83	31.19	31.66	31.93
24	27.43	27.66	27.90	27.76	27.61	30.38	29.51	29.56	28.66	31.25	31.93	31.50
25	27.25	28.42	27.30	27.76	28.05	30.12	29.45	30.53	29.55	31.20	32.05	31.39
26	27.24	29.07	27.27	27.74	29.11	30.04	29.65	30.74	29.63	31.20	31.76	31.38
27	27.11	27.92	26.59	27.69	29.12	30.09	29.54	30.41	29.64	31.58	31.56	31.37
28	27.04	27.84	26.42	27.83	29.55	30.13	30.13	30.47	29.65	31.71	31.52	31.33
29	27.55	27.26	26.48	28.27	29.39	30.10	30.28	30.19	29.93	31.36	31.50	31.82
30	28.06	---	26.52	27.31	29.45	30.42	29.60	30.10	29.08	31.30	31.51	32.04
31	28.32	---	27.25	---	29.51	---	29.33	30.00	---	31.33	---	31.84
MEAN	28.13	28.19	27.34	27.62	27.46	29.65	29.98	29.53	29.34	30.21	31.60	31.56

CAL YR 1984 MEAN 29.23 HIGH 26.01 LOW 32.10

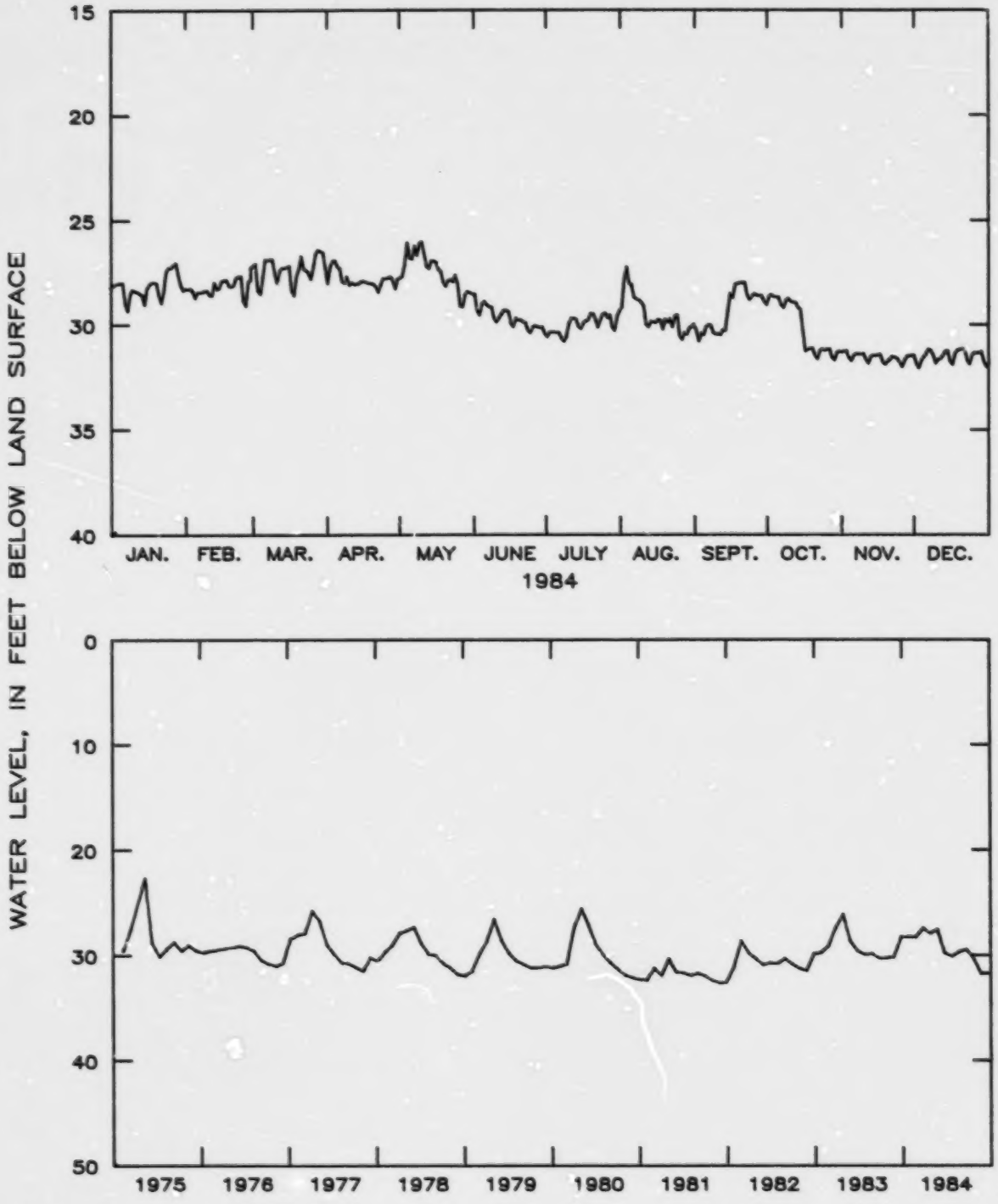

Figure 2.5–2.––Water level in observation well 05L001, Clay County.

07N001 CUTHBERT RANDOLPH COUNTY

3146020844737O1 Local number, 07N001.
LOCATION.--Lat 31°46'09", long 84°47'43", Hydrologic Unit 03110204, south of intersection of College and Andrew Streets, near electric substation.
Owner: City of Cuthbert.
AQUIFER.--Clayton.
WELL CHARACTERISTICS.--Drilled unused municipal well, diameter 8 in., depth 372 ft, casing depth unknown.
DATUM.--Altitude of land-surface datum is 460 ft.
Measuring point: Floor of recorder shelter, 3.30 ft above land-surface datum.
REMARKS.--Well pumped and sounded June 22, 1978, to a depth of 372 ft; water-quality sample collected at conclusion of pumping. Well near city wells. Water levels for periods of missing recorder record, April 16-29, July 23 to August 7, August 12, August 18 to September 13, and October 26 to November 15, were estimated.
PERIOD OF RECORD.--January 1965 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 132.0 ft below land-surface datum, December 10, 1967; lowest, 157.07 ft below land-surface datum, June 21, 1984.

Water level, in feet below land surface, through calendar year 1984 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	151.39	146.26	146.68	145.23	146.67	148.70	154.22	154.03	152.30	154.11	151.70	149.58
2	150.48	146.43	146.16	145.83	146.19	149.16	153.11	154.04	152.47	154.22	151.51	149.84
3	149.34	146.06	146.11	142.81	145.47	149.27	153.08	153.98	152.60	153.64	151.25	148.68
4	148.89	147.60	145.56	143.78	145.82	150.23	152.62	153.92	152.72	153.73	150.95	150.06
5	148.42	147.42	144.55	144.93	145.24	150.69	153.07	153.92	152.83	153.66	150.72	150.15
6	148.28	148.16	142.97	145.38	144.72	151.79	153.13	153.87	152.94	153.85	150.71	151.62
7	147.88	148.24	142.94	145.48	145.41	151.89	152.92	153.86	153.21	153.48	150.61	151.88
8	147.46	147.81	144.49	145.05	145.78	152.35	152.65	153.95	153.62	153.70	150.44	151.44
9	147.72	147.14	145.25	143.82	145.76	152.54	152.33	153.95	153.97	153.68	149.68	149.15
10	145.97	146.85	145.29	143.76	145.75	152.18	151.95	153.95	154.17	153.68	149.98	149.67
11	147.56	146.67	145.34	144.42	146.00	153.72	152.02	153.95	154.23	154.17	149.68	149.27
12	147.74	146.21	145.72	145.04	146.23	153.89	153.11	151.80	154.22	153.52	149.57	148.57
13	147.43	145.94	145.94	145.63	146.83	153.67	153.06	149.66	154.40	153.38	149.52	149.24
14	147.48	145.80	146.08	145.46	145.67	154.17	153.22	150.51	154.78	153.14	149.40	149.44
15	146.33	146.62	145.84	145.02	146.86	154.52	153.72	152.31	155.66	151.57	149.05	148.56
16	147.17	146.27	145.70	145.05	147.33	154.92	152.15	151.65	155.71	151.77	148.82	150.05
17	146.81	146.17	145.74	145.16	148.07	154.90	151.49	152.66	155.20	152.92	151.02	149.46
18	147.05	146.11	145.72	145.31	149.72	156.03	152.14	152.78	154.94	153.35	151.22	148.63
19	147.39	145.72	145.49	145.47	149.06	156.03	153.94	152.90	155.38	153.13	151.03	150.05
20	148.74	145.88	144.53	145.68	148.36	156.43	153.94	153.03	155.04	152.33	149.01	149.84
21	149.28	146.07	145.40	145.88	149.90	157.07	153.94	153.13	155.66	151.61	149.63	149.65
22	148.58	146.46	145.88	145.89	148.60	155.92	153.92	153.24	155.74	151.95	150.23	149.19
23	147.95	146.65	146.05	145.78	148.68	156.07	154.04	153.29	154.28	152.15	148.90	148.20
24	146.44	146.21	145.50	145.88	149.54	155.59	154.20	153.36	155.24	152.64	151.40	147.74
25	146.24	145.88	145.17	146.02	148.67	155.47	154.25	153.47	156.13	152.44	150.97	148.32
26	147.00	145.63	145.53	146.08	148.81	153.75	154.29	153.53	155.22	152.37	149.74	148.05
27	147.00	145.93	144.95	146.07	149.00	155.51	154.28	153.41	154.64	152.27	150.48	147.73
28	147.00	145.60	144.69	146.17	148.03	155.74	154.26	153.09	154.71	152.18	149.44	148.95
29	146.29	146.90	145.31	146.31	149.09	155.00	154.28	152.79	154.03	152.10	148.84	147.91
30	145.35	---	145.74	146.36	148.41	154.73	154.21	152.46	154.15	151.93	149.54	148.28
31	146.17	---	145.49	---	149.61	---	154.07	152.27	---	151.84	---	148.77
MEAN	147.64	146.51	145.36	145.29	147.27	153.77	153.36	153.06	154.34	152.92	150.16	149.29

CAL YR 1984 MEAN 149.92 HIGH 142.81 LOW 157.07

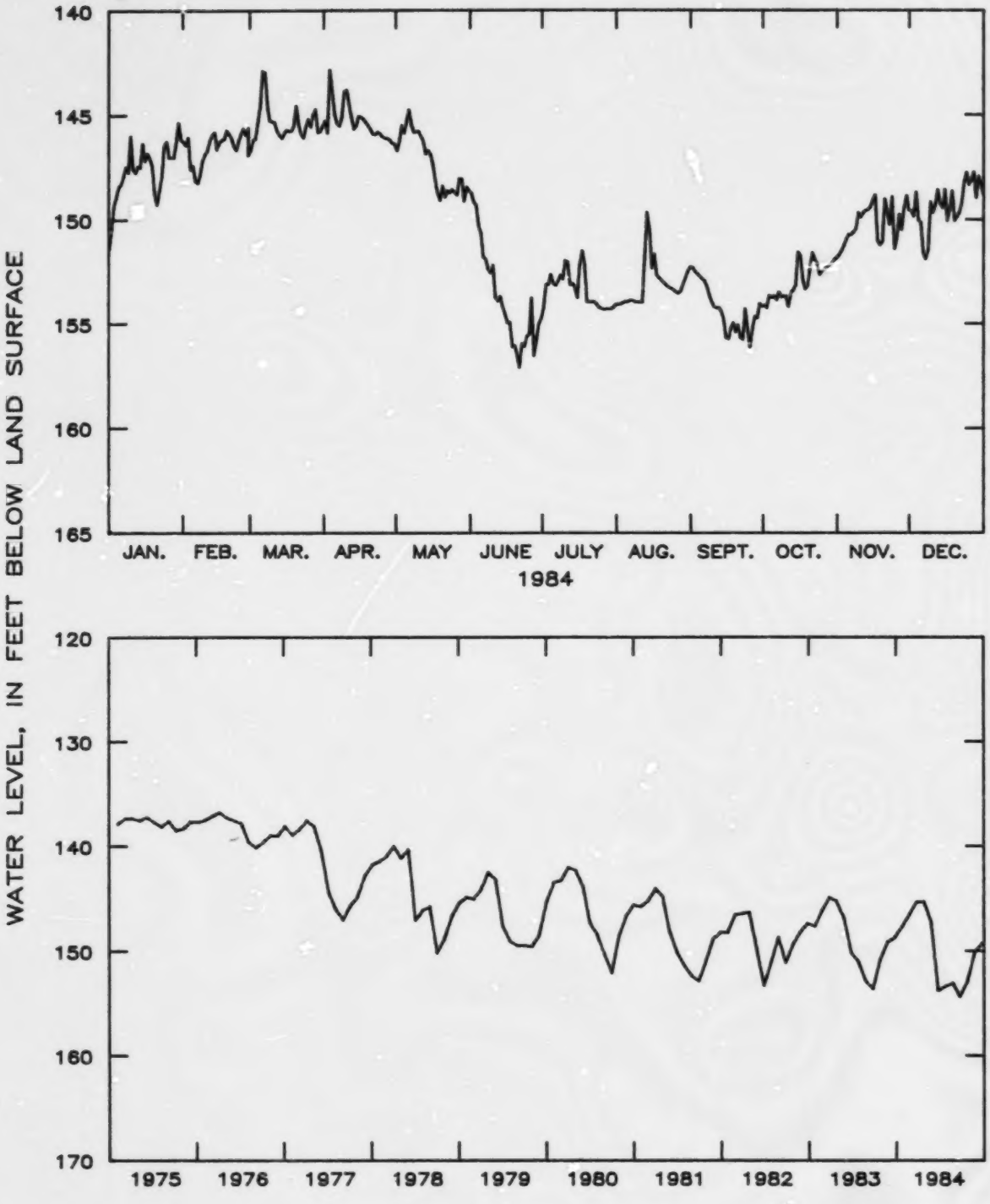

Figure 2.5–3.––Water level in observation well 07N001, Randolph County.

11L002 ALBANY NURSERY DOUGHERTY COUNTY

313530084203201 Local number, 11L002.
LOCATION.--Lat 31°35'32", long 84°20'35", Hydrologic Unit 03130008, Tallahassee Plantation, 10.4 mi west of Albany.
Owner: Georgia Department of Natural Resources, Albany Nursery.
AQUIFER.--Clayton.
WELL CHARACTERISTICS.--Drilled observation well, diameter 3 in., depth 656 ft, cased to 542 ft, open hole.
DATUM.--Altitude of land-surface datum is 222 ft.
Measuring point: Floor of recorder shelter, 3.02 ft above land-surface datum.
REMARKS.--Well pumped April 1976; water-quality sample collected at conclusion of pumping. Borehole geophysical survey conducted June 3, 1975.
PERIOD OF RECORD.--September 1973 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 58.90 ft below land-surface datum, April 29, 1975; lowest, 123.45 ft below land-surface datum, August 2, 1981.

Water level, in feet below land surface, through calendar year 1984 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	95.49	92.87	89.70	88.03	86.29	90.37	106.81	103.21	104.61	112.92	109.64	103.40
2	95.33	92.79	89.62	87.95	86.20	90.29	106.78	102.97	105.05	112.87	109.43	103.35
3	95.24	92.59	89.59	87.72	86.06	90.34	106.60	102.59	105.44	112.75	109.15	103.25
4	95.03	92.35	89.47	87.56	86.03	90.62	106.27	102.27	105.83	112.82	108.83	103.18
5	94.94	92.24	89.15	87.52	86.07	91.03	105.83	101.96	106.21	113.07	108.57	102.77
6	94.84	92.15	89.08	87.46	86.02	91.61	105.63	101.65	106.59	113.27	108.54	102.55
7	94.86	92.40	89.22	87.35	85.92	92.48	105.40	101.33	107.12	113.18	108.42	102.52
8	94.93	92.36	89.44	87.16	85.86	93.47	105.16	101.12	107.80	113.00	108.23	102.32
9	94.80	92.20	89.47	86.93	85.87	94.47	104.99	101.04	108.42	112.78	107.95	102.18
10	94.48	91.98	89.47	86.83	85.81	95.38	104.82	100.97	108.89	112.67	107.62	102.07
11	94.50	91.81	89.33	86.81	85.79	96.26	104.85	100.96	109.22	112.62	107.40	101.94
12	94.69	91.58	89.07	86.61	85.78	97.10	105.20	100.95	109.47	112.59	107.27	101.86
13	94.72	91.35	88.81	86.53	85.78	98.02	105.72	100.88	109.92	112.49	107.20	101.73
14	94.61	91.28	88.66	86.48	85.79	99.12	106.22	100.82	110.57	112.42	107.05	101.62
15	94.49	91.32	88.64	86.41	85.87	100.31	106.50	100.75	111.20	112.35	106.68	101.43
16	94.29	91.32	88.70	86.35	86.00	101.40	106.53	100.71	111.75	112.33	106.43	101.20
17	94.13	91.25	88.67	86.36	86.34	102.28	106.42	100.95	112.12	112.22	106.17	101.00
18	93.97	91.08	88.53	86.42	86.92	102.93	106.33	101.34	112.07	112.00	105.91	100.82
19	94.00	90.91	88.44	86.49	87.73	103.52	106.28	101.73	111.79	111.75	105.64	100.73
20	94.02	90.83	88.23	86.60	88.56	104.19	106.23	102.12	111.56	111.52	105.54	100.64
21	94.00	90.80	88.34	86.71	89.33	104.98	106.13	102.49	111.39	111.25	105.35	100.43
22	94.00	90.67	88.37	86.63	90.02	105.93	105.94	102.87	111.58	110.95	105.27	100.32
23	93.82	90.54	88.43	86.42	90.58	106.75	105.78	103.19	111.79	110.65	105.04	100.28
24	93.62	90.42	88.31	86.43	90.94	107.23	105.65	103.52	111.80	110.57	104.80	100.13
25	93.62	90.36	88.12	86.48	91.17	107.42	105.42	103.90	111.86	110.54	104.68	100.12
26	93.63	90.03	88.09	86.44	91.29	107.28	105.17	104.23	112.03	110.45	104.52	100.14
27	93.53	89.68	87.98	86.34	91.2.	107.17	104.88	104.38	112.25	110.33	104.27	99.98
28	93.38	89.73	87.72	86.35	91.12	107.08	104.58	104.33	112.48	110.21	103.89	99.74
29	93.27	89.72	87.82	86.39	90.87	106.89	104.31	104.29	112.68	110.11	103.65	99.58
30	93.17	---	87.96	86.35	90.63	106.80	103.96	104.23	112.03	109.92	103.43	99.47
31	93.03	---	87.98	---	90.42	---	103.53	104.31	---	109.81	---	99.30
MEAN	94.27	91.34	88.72	86.80	87.32	99.76	105.61	102.32	109.98	111.82	106.55	101.29

CAL YR 1984 MEAN 98.87 HIGH 85.78 LOW 113.27

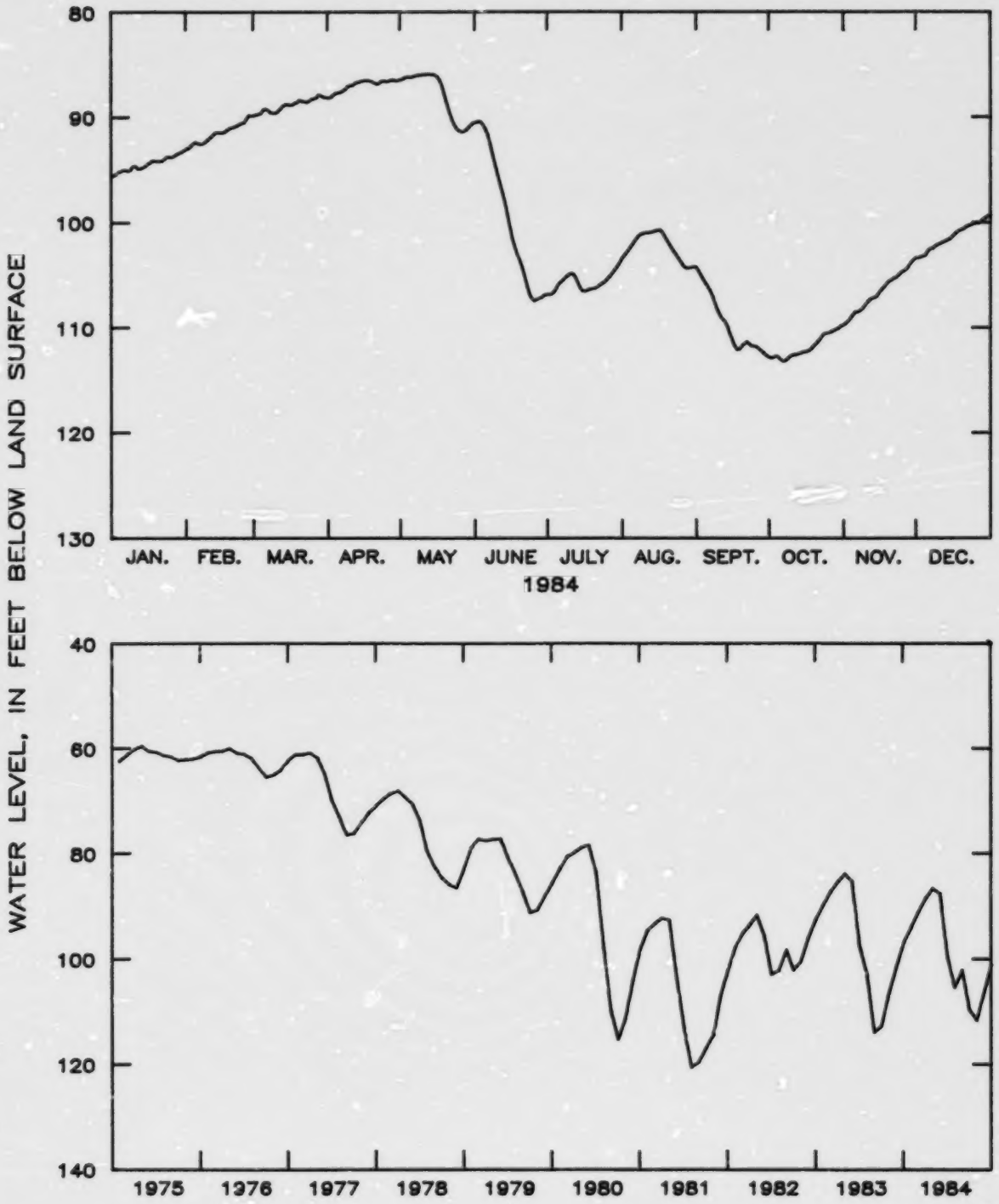

Figure 2.5–4.––Water level in observation well 11L002, Dougherty County.

13L002 TURNER CITY DOUGHERTY COUNTY

313554084062601 Local number, 13L002.
LOCATION.--Lat 31°35'54", long 84°06'25", Hydrologic Unit 03130008, Malone and Gardner Avenue near main entrance to Turner Field, Albany.
Owner: City of Albany, Turner City.
AQUIFER.--Clayton.
WELL CHARACTERISTICS.--Drilled unused supply well, diameter 12 in. and 8 in., depth 760 ft, cased to 713 ft, open hole.
DATUM.--Altitude of land-surface datum is 212.84 ft.
Measuring point: Floor of recorder shelter, 3.2 ft above land-surface datum.
REMARKS.--Well pumped and sounded to a depth of 760 ft, June 21, 1978: water-quality sample collected at conclusion of pumping. Borehole geophysical survey conducted March 17, 1977. Water levels for periods of missing recorder record, January 1-2, and January 4 to February 6, were estimated.
PERIOD OF RECORD.--December 1957 to December 1959. January 1962 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 38.19 ft below land-surface datum, April 1, 1959; lowest, 153.04 ft below land-surface datum, August 1, 1981.

Water level, in feet below land surface, through calendar year 1984 daily mean values - monthly mean values.

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	125.59	121.36	119.00	120.53	121.57	124.61	134.01	131.26	130.55	133.04	131.41	131.37
2	124.92	121.59	121.04	120.49	121.88	124.47	133.98	133.42	131.62	132.50	131.82	131.43
3	124.60	121.27	121.73	120.35	121.55	122.47	133.98	133.21	130.68	135.52	131.02	131.32
4	124.58	120.35	120.39	120.26	121.06	122.84	133.98	131.86	130.74	137.09	129.80	131.34
5	124.32	120.51	119.92	120.88	121.53	125.10	128.64	131.45	131.41	137.30	130.30	131.14
6	124.17	120.59	119.68	120.78	120.93	126.26	127.05	130.54	131.82	135.33	130.55	131.46
7	123.58	120.71	120.31	121.11	121.85	127.17	130.24	132.72	131.43	133.23	129.63	132.06
8	124.12	122.62	121.18	121.61	121.77	127.96	129.07	134.03	130.32	132.60	129.31	132.61
9	124.26	123.15	120.66	120.45	120.81	128.60	128.27	132.98	128.39	133.44	129.90	131.73
10	123.72	123.32	120.37	120.08	121.87	128.63	130.98	134.27	128.32	136.65	132.36	131.59
11	123.84	122.35	119.98	119.99	122.06	128.57	130.86	134.72	130.80	136.94	130.58	131.19
12	124.33	122.80	120.08	120.82	120.02	128.95	132.00	134.43	130.63	138.28	129.61	128.52
13	124.23	123.07	119.64	121.41	121.52	129.37	132.70	134.16	131.52	137.18	131.12	128.39
14	124.33	123.44	120.76	120.30	122.06	129.55	133.23	134.28	133.84	137.84	130.47	129.08
15	124.16	122.94	121.96	119.94	122.60	129.92	131.83	134.42	134.95	138.93	131.25	128.32
16	124.10	123.05	122.28	119.81	123.10	130.20	132.84	134.71	134.98	139.26	131.58	128.13
17	124.10	124.13	122.33	118.70	123.16	130.45	132.33	134.87	134.95	139.21	132.43	127.10
18	124.08	123.14	121.50	119.34	123.57	130.71	130.89	134.79	134.94	138.95	132.62	128.37
19	124.18	122.25	121.62	120.74	124.19	131.21	132.67	134.55	134.97	138.80	132.49	129.83
20	123.87	122.02	121.47	121.31	124.34	131.90	133.20	134.24	134.94	137.71	132.95	129.71
21	123.43	122.09	120.48	121.31	124.17	132.62	133.21	133.44	134.94	134.72	133.41	130.84
22	123.12	122.70	120.62	121.72	124.95	133.19	129.72	133.12	134.95	134.95	133.19	131.11
23	122.95	123.07	121.63	121.76	125.43	133.38	129.61	132.49	134.94	137.32	132.65	130.87
24	122.99	122.57	120.51	121.52	125.75	133.35	130.64	131.26	134.95	137.57	132.26	130.54
25	122.74	122.93	119.75	119.83	125.78	133.21	132.06	130.74	135.01	136.67	132.07	130.23
26	122.65	121.50	120.43	120.34	125.69	133.31	131.36	131.24	135.01	136.26	131.73	130.00
27	122.47	120.09	120.44	121.45	125.64	132.70	131.20	133.75	135.01	135.25	130.22	128.77
28	122.40	118.82	119.34	122.16	124.88	133.80	132.12	133.65	135.60	132.93	130.91	128.69
29	122.15	118.21	121.04	122.09	124.55	134.00	131.14	132.08	136.92	131.59	131.20	129.54
30	121.69	---	122.04	121.02	124.53	134.04	129.75	130.23	134.86	131.67	131.27	129.68
31	121.13	---	120.86	---	123.30	---	131.48	129.52	---	131.33	---	127.29
MEAN	123.64	121.95	120.74	120.67	123.10	129.75	131.45	132.98	133.13	135.81	131.34	130.07

CAL YR 1984 MEAN 127.91 HIGH 118.21 LOW 139.26

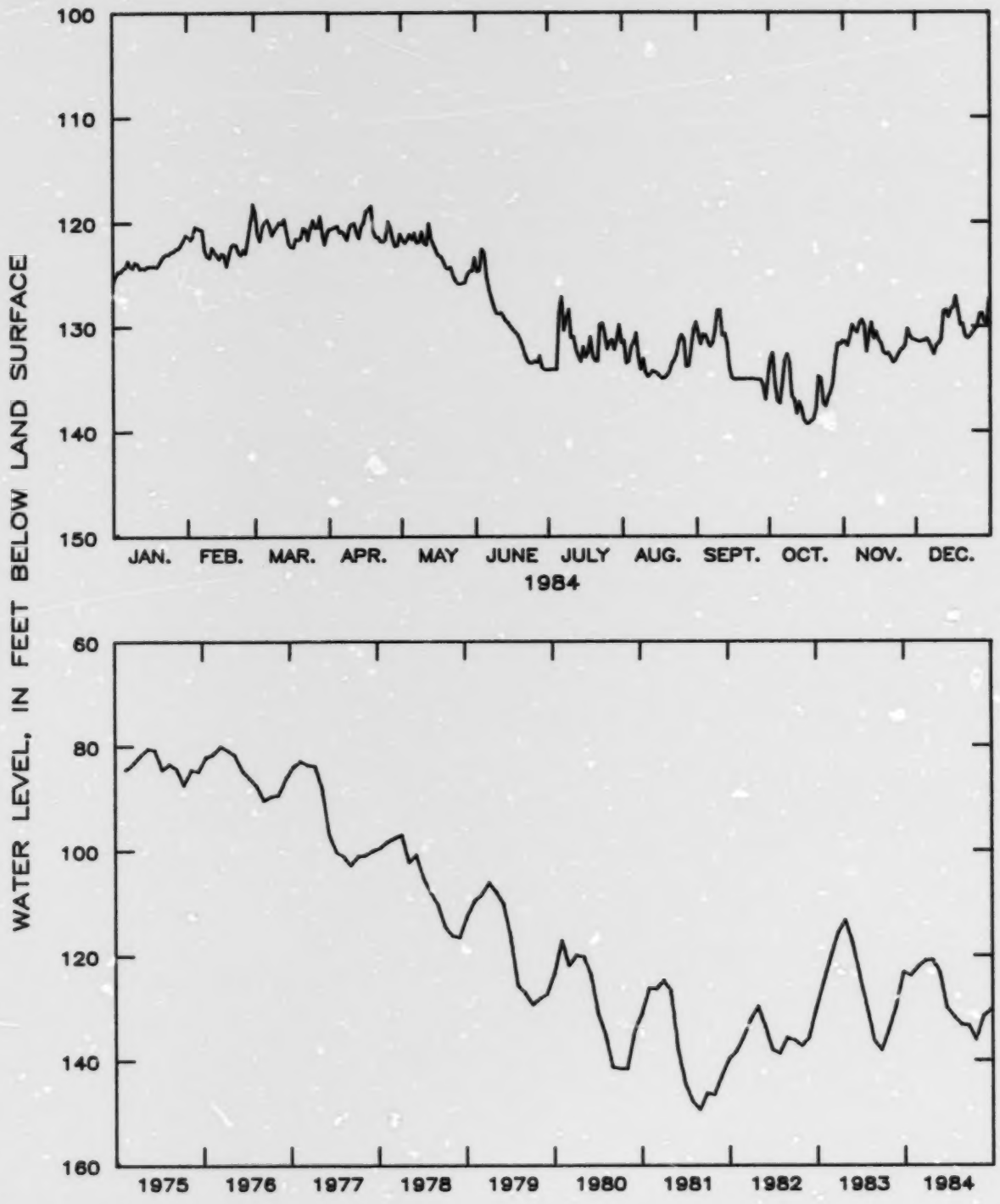

Figure 2.5–5.––Water level in observation well 13L002, Dougherty County.

2.6 Claiborne Aquifer

The Claiborne aquifer is a major aquifer in southwestern Georgia and supplies more than 36 Mgal/d for municipal, agricultural, and industrial use (McFadden and Perriello, 1983). The aquifer is comprised of several hydraulically interconnected water-bearing zones of sand, limestone, and coquina. In east-central Georgia, the Claiborne aquifer is part of the Gordon aquifer system (Brooks and others, 1985).

Water levels in the Claiborne aquifer near Albany, Dougherty County, are affected primarily by changes in local and regional pumping. Mean annual water levels in three wells tapping the Claiborne aquifer near Albany ranged from 0.5 foot lower to 4.4 feet higher in 1984 than in 1983. The 10-year hydrographs show the recovery from the effects of the 1981 drought.

Figure 2.6-1.—Observation well locations and the water level in the Claiborne aquifer, October 1984.

11L001 TEST WELL 4 DOUGHERTY COUNTY

31353084203202 Local number, 11L001.
LOCATION.--Lat 31°35'30", long 84°20'32", Hydrologic Unit 03130008, 10.4 mi west of Albany.
Owner: U.S. Geological Survey, test well 4.
AQUIFER.--Claiborne.
WELL CHARACTERISTICS.--Drilled unused observation well, depth 251 ft, cased to 233 ft.
DATUM.--Altitude of land-surface datum is 220 ft.
Measuring point: Floor of recorder shelter, 3.0 ft above land-surface datum.
REMARKS.--Water levels for periods of missing recorder record, January 7 to February 6, February 9-27, March 2-8, and March 17 to April 11, were estimated.
PERIOD OF RECORD.--March 1978 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 12.11 ft below land-surface datum, June 5-6, 1978; lowest, 26.38 ft below land-surface datum, November 21-22, 1981.

Water level, in feet below land surface, through calendar year 1984 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	18.93	16.57	14.87	14.02	13.97	14.13	16.09	18.17	18.72	21.4[illegible]	24.33	24.90
2	18.82	16.53	14.81	13.99	13.86	14.15	16.17	18.19	18.77	21.[illegible]9	24.35	24.94
3	18.71	16.49	14.79	14.00	13.77	14.16	16.23	18.18	18.82	21.[illegible]2	24.35	24.95
4	18.61	16.47	14.77	13.97	13.72	14.21	16.31	18.17	18.87	21.85	24.35	25.02
5	18.55	16.43	14.72	13.92	13.75	14.27	16.39	18.16	18.91	21.9[illegible]	24.35	25.07
6	18.48	16.37	14.72	13.94	13.78	14.29	16.47	18.14	18.96	22.11	24.38	25.05
7	18.43	16.29	14.75	13.93	13.82	14.31	16.54	18.12	19.02	22.22	24.43	25.06
8	18.31	16.19	14.74	13.87	13.91	14.33	16.62	18.11	19.07	22.30	24.45	25.07
9	18.18	16.12	14.73	13.82	13.82	14.36	16.70	18.03	19.10	22.38	24.47	25.07
10	18.09	16.12	14.73	13.79	13.83	14.41	16.78	18.00	19.15	22.44	24.48	25.07
11	17.95	16.12	14.72	13.82	13.84	14.47	16.82	17.99	19.24	22.53	24.49	25.08
12	17.79	16.09	14.68	13.92	13.86	14.51	16.87	17.99	19.34	22.59	24.53	25.09
13	17.70	15.99	14.65	13.92	13.87	14.58	16.95	18.00	19.44	22.65	24.57	25.11
14	17.63	15.80	14.63	13.92	13.87	14.64	17.05	18.02	19.53	22.73	24.64	25.13
15	17.55	15.61	14.62	13.89	13.87	14.68	17.13	18.04	19.62	22.82	24.65	25.15
16	17.43	15.47	14.58	13.88	13.83	14.78	17.22	18.07	19.73	22.94	24.65	25.16
17	17.33	15.33	14.60	13.89	13.92	14.83	17.30	18.08	19.87	23.03	24.65	25.16
18	17.21	15.27	14.59	13.91	13.92	14.95	17.37	18.12	19.98	23.10	24.65	25.16
19	17.17	15.25	14.46	13.94	13.91	15.04	17.43	18.17	20.07	23.17	24.64	25.14
20	17.20	15.22	14.42	13.93	13.92	15.14	17.48	18.24	20.18	23.24	24.65	25.13
21	17.24	15.23	14.46	13.94	13.93	15.21	17.53	18.31	20.28	23.35	24.70	25.13
22	17.27	15.22	14.46	13.85	13.96	15.24	17.60	18.37	20.41	23.46	24.73	25.13
23	17.30	15.19	14.42	13.70	13.97	15.31	17.68	18.40	20.52	23.66	24.75	25.14
24	17.31	15.06	14.37	13.69	13.98	15.42	17.75	18.44	20.63	23.78	24.78	25.15
25	17.21	15.01	14.23	13.74	14.00	15.52	17.80	18.50	20.72	23.90	24.84	25.17
26	17.11	14.96	14.23	13.77	14.04	15.64	17.83	18.57	20.84	23.95	24.85	25.18
27	17.04	14.95	14.02	13.79	14.05	15.76	17.88	18.59	20.96	24.00	24.87	25.17
28	16.97	14.96	14.02	13.82	14.07	15.88	17.93	18.62	21.07	24.07	24.89	25.16
29	16.86	14.92	14.04	13.83	14.07	15.97	17.99	18.64	21.18	24.13	24.89	25.13
30	16.73	---	14.06	13.84	14.09	15.99	18.06	18.65	21.32	24.20	24.89	25.09
31	16.62	---	14.07	---	14.10	---	18.13	18.66	---	24.27	---	25.06
MEAN	17.67	15.70	14.52	13.87	13.91	14.87	17.16	18.25	19.81	22.96	24.61	25.10

CAL YR 1984 MEAN 18.21 HIGH 13.69 LOW 25.18

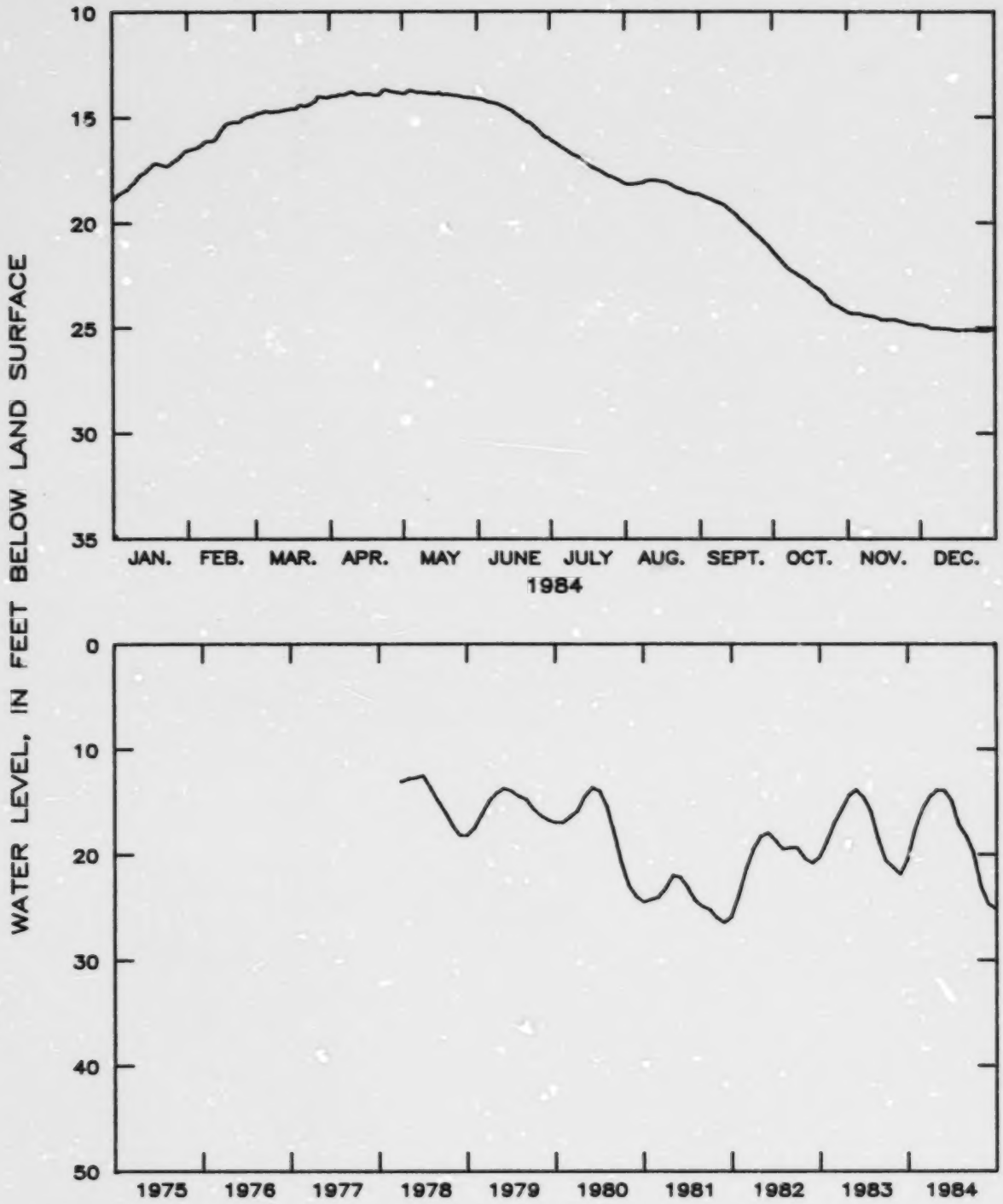

Figure 2.6–2.––Water level in observation well 11L001 Dougherty County.

12L019 TEST WELL 5 DOUGHERTY COUNTY

313534084103001 Local number, 12L019.
LOCATION.--Lat 31°35'34", long 84°10'30", Hydrologic Unit 03130008, located in park at intersection of Slappey Drive and Fifth Avenue.
Owner: U.S. Geological Survey, test well 5.
AQUIFER.--Claiborne.
WELL CHARACTERISTICS.--Drilled unused observation well, depth 257 ft, cased and screened to 88 ft.
DATUM.--Altitude of land-surface datum is 198 ft.
Measuring point: Floor of recorder shelter, 3.0 ft above land-surface datum.
REMARKS.--Water level for periods of missing recorder record, January 1-19, May 20 to June 19, June 21-30, and October 3-8, were estimated.
PERIOD OF RECORD.--March 1978 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 72.35 ft below land-surface datum, April 20, 1983; lowest, 99.53 ft below land-surface datum, August 1-2, 1978.

Water level, in feet below land surface, through calendar year 1984 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	80.58	77.74	77.02	74.11	73.52	74.45	82.43	81.50	80.19	83.91	86.20	86.17
2	80.50	77.93	77.47	74.45	73.75	74.27	82.85	81.43	80.26	83.87	85.93	86.22
3	80.34	78.13	77.56	74.52	74.02	74.06	83.13	81.41	80.01	83.68	85.64	86.37
4	80.29	78.00	77.51	74.55	74.03	73.91	83.38	81.41	79.87	83.49	85.11	86.35
5	80.36	77.44	76.69	74.61	74.24	73.88	83.60	81.12	79.97	83.30	84.59	86.37
6	80.63	77.27	76.03	74.69	74.50	73.94	83.87	80.38	80.36	83.10	84.22	86.47
7	80.98	77.39	76.07	74.70	74.26	74.04	84.24	79.38	81.02	82.91	84.09	86.55
8	81.08	77.49	76.11	74.68	73.88	74.12	84.46	78.51	81.63	82.72	84.30	86.73
9	80.83	77.57	76.07	74.55	73.92	74.14	84.44	78.07	81.95	82.53	84.62	86.45
10	80.47	77.89	75.97	74.62	74.04	74.13	84.07	77.57	81.99	82.84	84.64	85.80
11	80.31	78.45	75.77	74.67	74.25	74.06	83.42	77.13	82.11	83.03	84.23	85.64
12	80.24	78.77	75.54	74.62	74.39	74.05	82.89	77.17	82.49	83.38	83.78	85.23
13	80.28	78.75	75.31	74.48	74.36	74.12	82.61	77.29	82.72	83.63	83.40	84.98
14	80.35	78.69	75.14	74.51	73.95	74.18	82.38	77.29	82.92	83.64	83.05	85.10
15	80.19	78.63	74.98	74.26	74.02	74.24	82.03	77.29	83.22	83.67	83.31	85.36
16	79.98	78.71	74.86	73.55	74.45	74.33	81.39	77.29	82.99	84.07	83.73	85.59
17	79.65	78.80	74.74	73.39	74.54	74.48	81.23	78.97	82.63	84.68	83.94	85.03
18	79.40	78.80	74.13	73.51	74.65	74.57	81.43	80.02	82.74	84.91	83.56	84.80
19	79.32	78.71	73.79	73.56	74.77	74.65	81.49	80.18	83.28	84.98	83.26	85.10
20	79.26	78.59	73.63	73.56	74.84	74.79	81.46	79.80	83.30	85.14	83.27	85.49
21	79.29	78.48	73.61	73.65	74.89	75.70	81.44	79.92	83.17	84.69	83.45	85.54
22	79.04	78.35	73.72	73.70	75.00	76.61	81.26	80.02	83.60	84.24	83.64	85.25
23	78.81	77.61	73.72	73.73	75.15	77.44	80.55	79.86	83.73	84.43	83.58	85.06
24	79.04	77.02	73.73	73.80	75.30	78.11	80.30	79.55	83.92	84.94	83.81	84.83
25	79.18	77.01	73.75	73.93	75.43	78.71	80.19	79.89	84.09	85.42	84.28	84.62
26	78.74	77.01	74.03	73.93	75.49	79.31	80.27	80.40	84.07	85.74	84.76	84.42
27	78.10	76.67	74.06	73.93	75.51	79.92	80.45	79.97	83.98	85.93	85.14	84.36
28	77.68	76.69	73.86	73.93	75.38	80.55	80.60	79.71	83.64	86.10	85.45	84.59
29	77.56	76.85	73.72	73.93	75.07	81.09	80.76	79.73	83.77	86.00	85.75	84.45
30	77.35	---	73.69	73.73	74.83	81.63	80.99	79.88	84.03	86.18	86.02	83.99
31	77.69	---	73.93	---	74.62	---	81.25	79.97	---	86.24	---	83.89
MEAN	79.59	77.91	75.35	74.13	74.55	75.78	82.09	79.42	82.46	84.10	84.36	85.38

CAL YR 1984 MEAN 79.60 HIGH 73.39 LOW 86.73

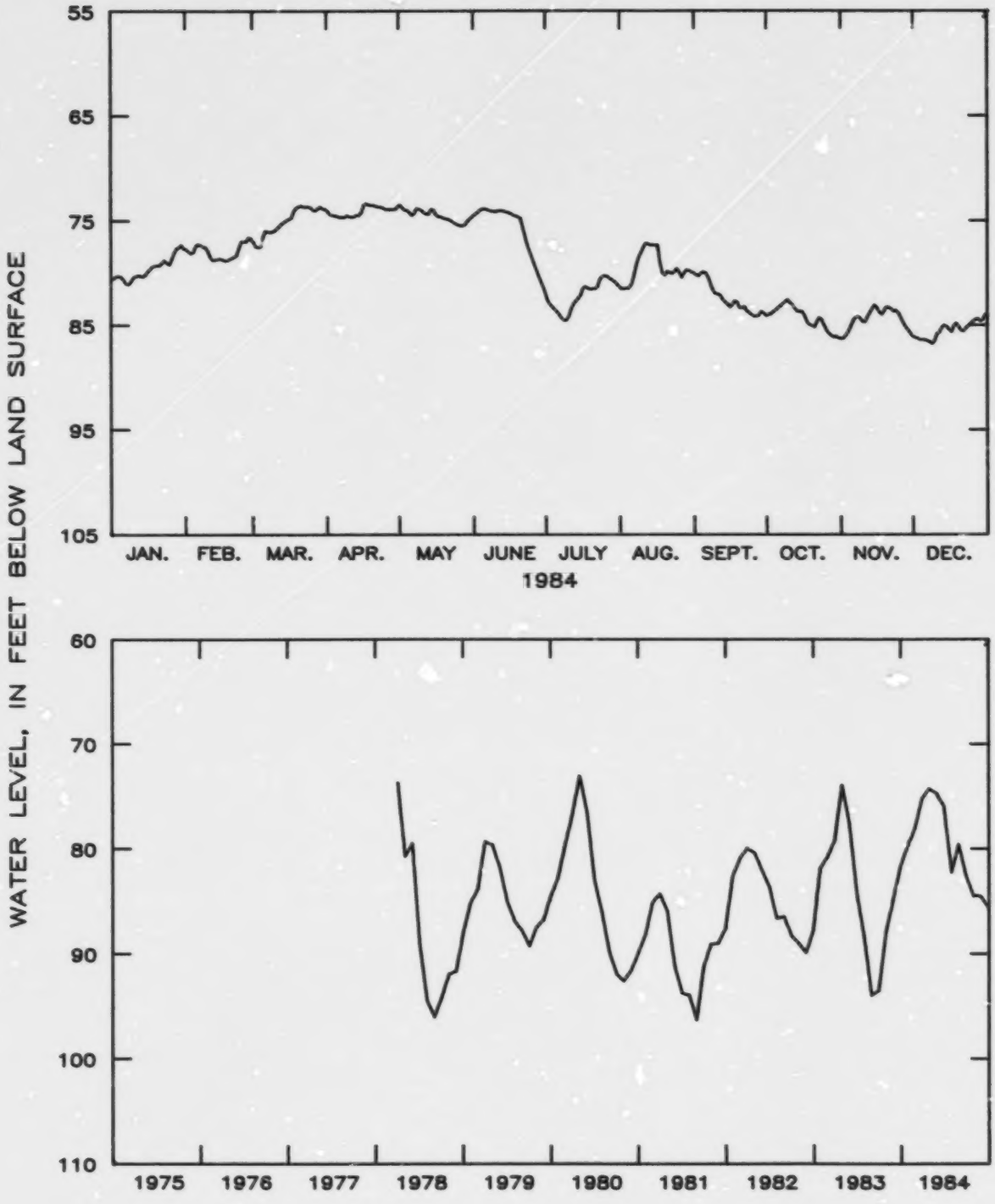

Figure 2.6–3.––Water level in observation well 12L019, Dougherty County.

13L011 TEST WELL 2 DOUGHERTY COUNTY

313105084064301 Local number, 13L011.
LOCATION.--Lat 31°31'05", long 84°06'43", Hydrologic Unit 03130008, about 6.5 mi southeast of Albany off U.S. Highway 19 on School Bus Road.
Owner: U.S. Geological Survey, test well 2.
AQUIFER.--Claiborne.
WELL CHARACTERISTICS.--Drilled unused observation well, depth 418 ft, cased to 398 ft.
DATUM.--Altitude of land-surface datum is 195 ft.
Measuring point: Floor of recorder shelter, 3.0 ft above land-surface datum.
REMARKS.--Water levels for period of missing recorder record, October 10-16, were estimated.
PERIOD OF RECORD.--June 1977 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 60.01 ft below land-surface datum, April 5, 1978; lowest, 95.00 ft below land-surface datum, August 9-11, 1981.

Water level, in feet below land surface, through calendar year 1984 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	73.73	71.04	68.84	66.13	66.80	71.71	74.81	74.97	75.92	77.76	79.56	76.66
2	73.59	70.78	68.91	66.19	67.02	71.69	74.90	75.05	76.08	77.78	79.40	76.87
3	73.38	70.40	68.95	66.08	67.20	71.65	75.05	74.98	76.08	77.70	79.29	76.98
4	73.27	70.09	68.79	65.93	67.44	71.66	75.10	74.79	76.01	77.88	79.36	76.86
5	73.28	69.85	68.46	65.83	67.53	71.79	75.09	74.68	76.07	78.22	79.49	76.59
6	73.49	69.69	68.05	65.68	67.59	72.02	75.01	74.59	76.22	78.58	79.63	76.58
7	73.78	69.54	67.98	65.61	67.60	72.28	75.00	74.52	76.51	78.88	79.76	76.64
8	73.83	69.34	68.02	65.52	67.56	72.53	75.02	74.53	76.72	79.07	79.77	76.58
9	73.52	69.12	68.00	65.26	67.55	72.71	75.13	74.51	76.82	79.18	79.68	76.51
10	73.10	68.90	67.87	65.12	67.57	72.87	75.20	74.53	76.92	79.24	79.52	76.55
11	72.88	68.80	67.67	65.07	67.73	72.96	75.28	74.66	76.98	79.29	79.38	76.66
12	72.75	68.81	67.47	65.10	68.01	73.11	75.51	74.84	77.17	79.35	79.39	76.68
13	72.74	68.74	67.31	65.17	68.30	73.35	75.62	74.88	77.31	79.40	79.54	76.65
14	72.75	68.70	67.40	65.18	68.49	73.57	75.66	74.88	77.41	79.46	79.55	76.56
15	72.53	68.68	67.43	65.17	68.71	73.80	75.65	75.09	77.60	79.52	79.55	76.38
16	72.16	68.66	67.41	65.18	69.01	74.05	75.75	75.40	77.77	79.57	79.40	76.09
17	71.85	68.71	67.27	65.21	69.44	74.37	75.78	75.60	77.65	79.63	79.20	75.86
18	71.57	68.86	67.07	65.36	69.74	74.62	75.71	75.85	77.44	79.46	78.96	75.72
19	71.43	68.81	66.84	65.50	69.89	74.87	75.70	76.08	77.44	79.19	78.71	75.75
20	71.31	68.65	66.63	65.68	70.12	75.17	75.78	76.07	77.36	78.89	78.34	75.62
21	71.23	68.53	66.63	65.69	70.34	75.35	75.81	75.87	77.36	78.71	78.17	75.46
22	71.20	68.42	66.68	65.60	70.61	75.54	75.74	75.75	77.49	78.68	78.08	75.46
23	70.98	68.29	66.69	65.53	70.93	75.66	75.55	75.75	77.62	78.83	78.00	75.51
24	70.57	68.29	66.65	65.58	71.24	75.58	75.39	75.77	77.58	79.08	77.87	75.48
25	70.47	68.34	66.52	65.64	71.54	75.45	75.38	75.77	77.43	79.29	77.69	75.53
26	70.49	68.33	66.40	65.74	71.76	75.33	75.41	75.85	77.42	79.43	77.38	75.54
27	70.47	68.06	66.17	66.11	71.94	75.21	75.44	76.04	77.53	79.59	77.06	75.48
28	70.59	68.19	65.90	66.48	71.98	75.11	75.47	76.07	77.74	79.69	76.89	75.48
29	70.86	68.61	66.00	66.55	71.83	74.92	75.43	75.96	77.80	79.69	76.73	75.29
30	70.99	---	66.13	66.64	71.76	74.74	75.20	75.90	77.69	79.69	76.54	75.02
31	71.10	---	66.11	---	71.71	---	74.97	75.82	---	79.68	---	74.86
MEAN	72.13	69.01	67.30	65.65	69.32	73.79	75.37	75.32	77.10	79.05	78.73	76.06

CAL YR 1984 MEAN 73.25 HIGH 65.07 LOW 79.77

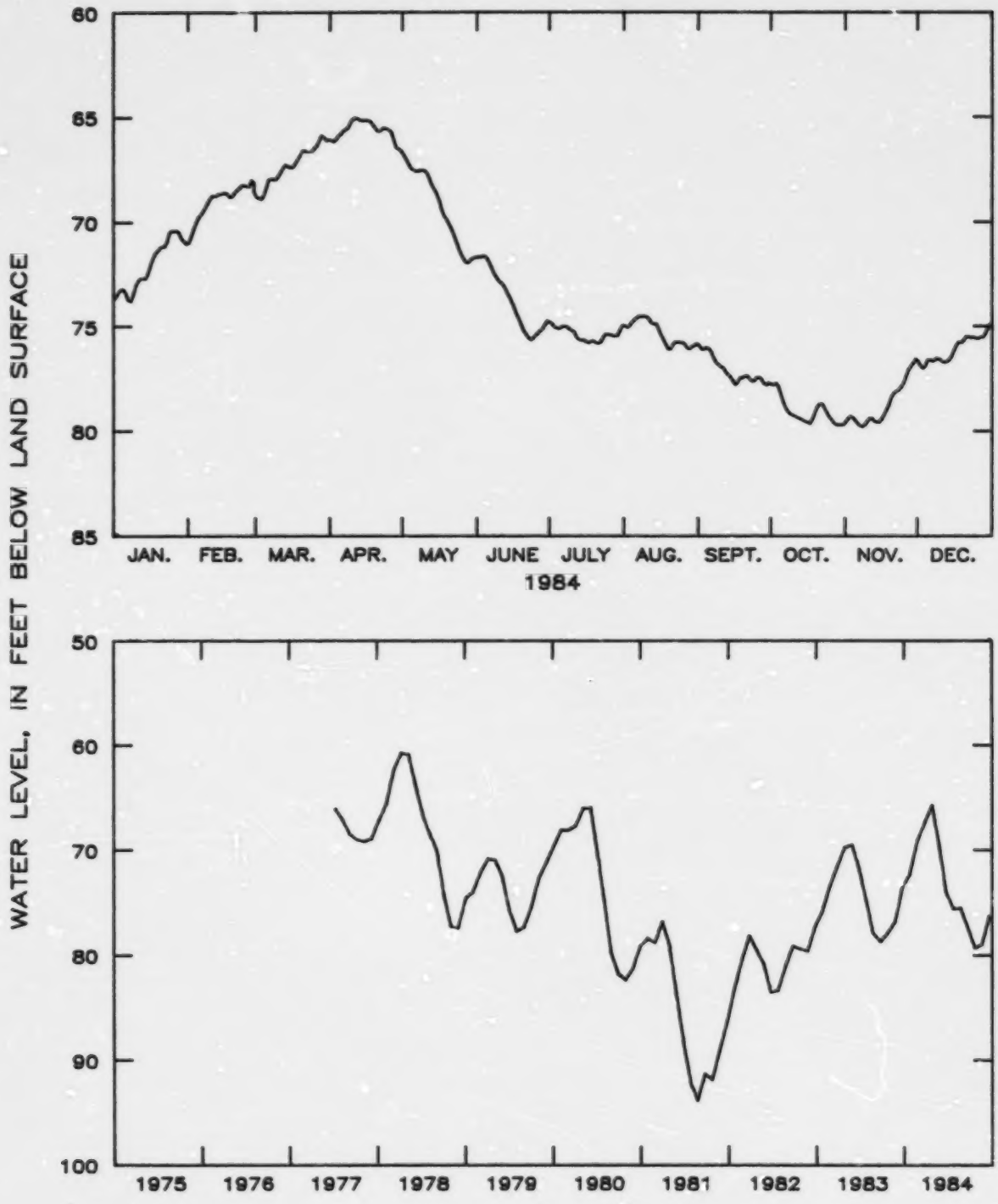

Figure 2.6–4.––Water level in observation well 13L011, Dougherty County.

2.7 Floridan Aquifer System

The Floridan aquifer system (formerly the principal artesian aquifer) is one of the most productive ground-water reservoirs in the United States. Regionally, the Floridan aquifer system has been divided by Miller (1985) into the Upper and Lower Floridan aquifers. About 600 Mgal/d is pumped from the aquifer system in Georgia, mostly for industrial use and for irrigation (Pierce and Barber, 1982).

The aquifer system consists of a sequence of limestone and dolostone that underlies most of the Georgia Coastal Plain. Water in the Floridan aquifer system is under artesian pressure except where the aquifer system crops out at land surface. In some areas, the artesian pressure is sufficient to produce flowing wells.

In areas of outcrop, water levels in wells tapping the Floridan aquifer system fluctuate seasonally in response to recharge from precipitation. Where the aquifer system is deeply buried, ground-water levels respond to pumping, and the long-term fluctuations relating to recharge are less pronounced.

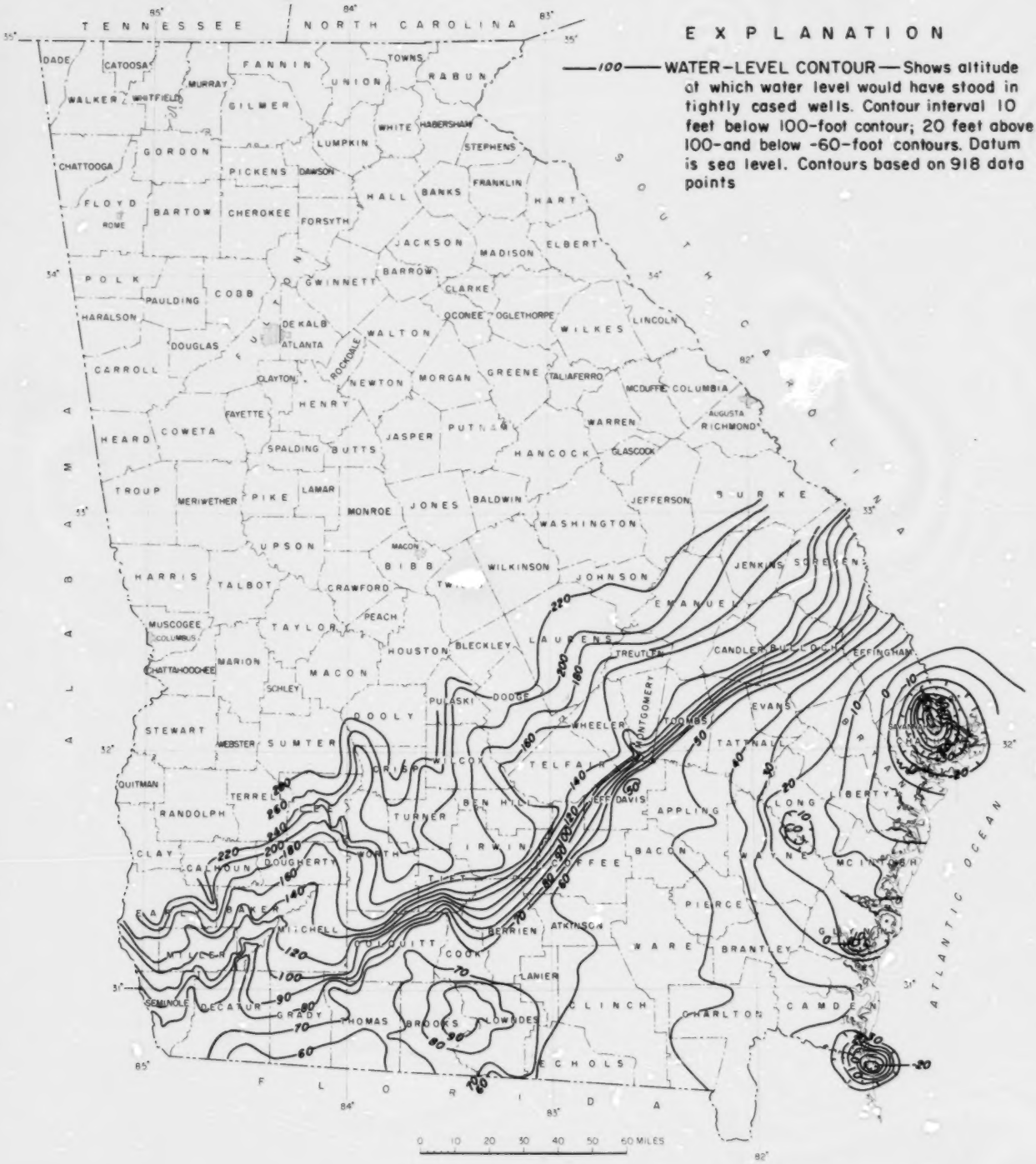
EXPLANATION
—100— WATER-LEVEL CONTOUR — Shows altitude at which water level would have stood in tightly cased wells. Contour interval 10 feet below 100-foot contour; 20 feet above 100-and below -60-foot contours. Datum is sea level. Contours based on 918 data points
TENNESSEE
NORTH CAROLINA
ATLANTIC OCEAN
FLORIDA
ALABAMA
0 10 20 30 40 50 60 MILES

Figure 2.7-1.—Water level in the Floridan aquifer system, November 1982.

2.7.1 Southwest area

Ground-water levels in the Floridan aquifer system in southwestern Georgia respond to variations in precipitation, evapotranspiration, stream stage, and pumping. More than 90 percent of all ground water used for irrigation in this area comes from the Floridan aquifer system.

Water levels began declining in the late seventies due to below-normal precipitation and increased irrigation pumping. Above-normal precipitation and a decreased need for irrigation pumping during the 1983 and 1984 growing seasons enabled the water levels to continue their recovery from the record lows of 1981. Record high water levels were reached at well 06F001 in March 1984, and at wells 10G313, 09F520, and 08G001 in April 1984.

Mean annual water levels in the southwest area ranged from 0.5 foot lower to 6.6 feet higher in 1984 than in 1983.

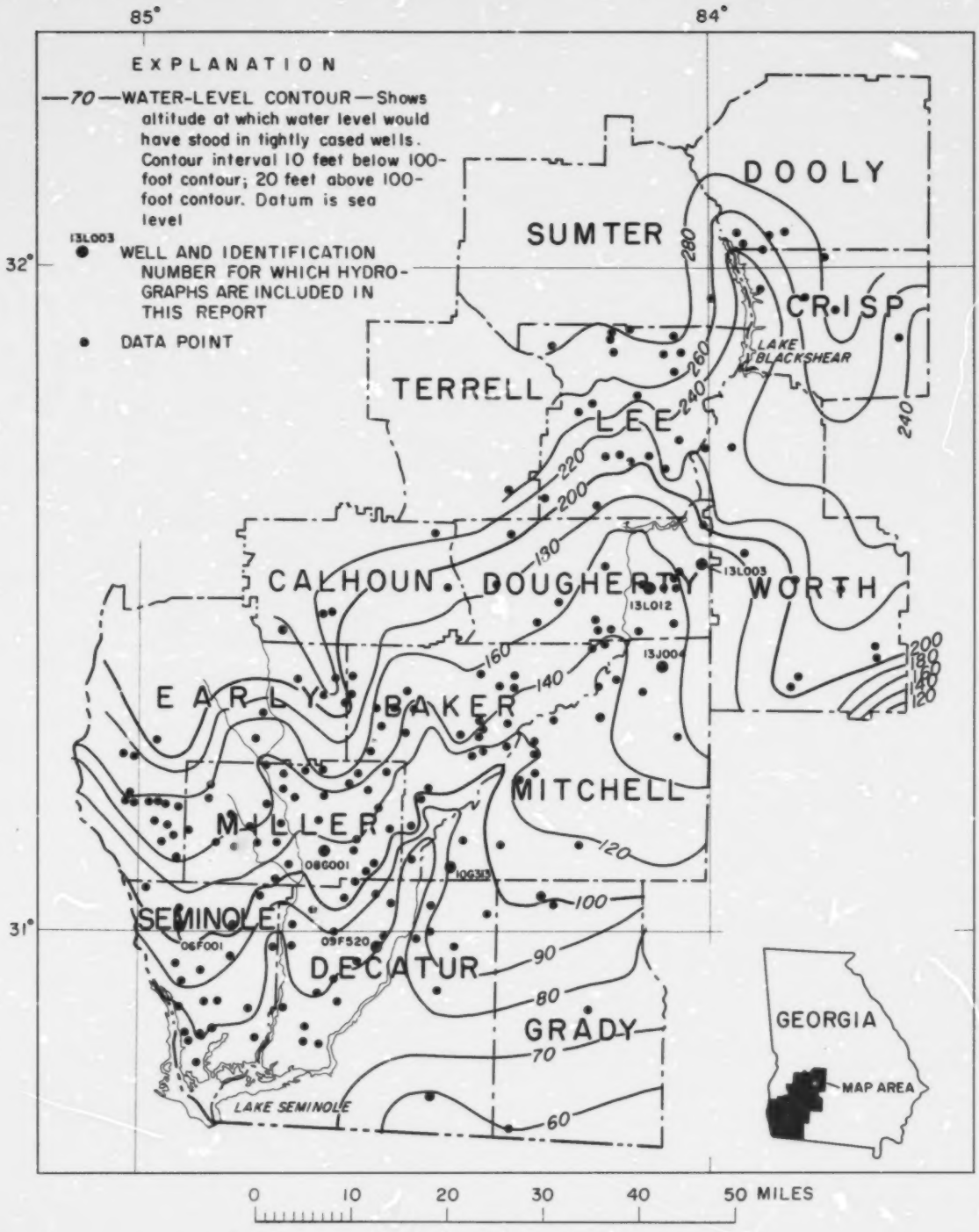

Figure 2.7.1-1—Observation well locations and the water level in the Floridan aquifer system in the southwest area, November 1982.

13L003 ALBANY-DOUGHERTY COUNTY DOUGHERTY COUNTY

313748084002901 Local number, 13L003.
LOCATION.--Lat 31°33'13", long 84°00'21", Hydrologic Unit 03130008, near northeast corner of Marine Corps Supply Center, Acree, Ga.
Owner: City of Albany and Dougherty County.
AQUIFER.--Floridan aquifer system.
WELL CHARACTERISTICS.--Drilled unused supply well, diameter 6 in., depth 259 ft, cased to 206 ft, open hole.
DATUM.--Altitude of land-surface datum is 225 ft.
Measuring point: Floor of recorder shelter, 4.10 ft above land-surface datum.
REMARKS.--Well pumped and sounded June 21, 1978; water-quality sample collected at conclusion of pumping. Borehole geophysical survey conducted March 17, 1977.
PERIOD OF RECORD.--January 1963 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 17.41 ft below land-surface datum, April 2, 1965; lowest, 44.89 ft below land-surface datum, December 13, 1981.

Water level, in feet below land surface, through calendar year 1984 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	31.54	26.80	25.97	22.50	22.61	26.11	28.49	28.65	29.01	31.36	33.24	34.67
2	31.33	26.70	25.75	22.55	22.57	26.24	28.53	28.33	29.15	31.45	33.24	34.74
3	31.19	26.45	25.64	22.43	22.49	26.39	28.47	27.52	29.15	31.46	33.25	34.83
4	31.22	26.34	25.52	22.23	22.51	26.56	28.46	27.19	29.20	31.53	33.28	34.92
5	31.13	26.38	25.27	22.29	22.54	26.70	28.47	26.95	29.15	31.26	33.37	34.92
6	31.10	26.66	24.00	22.37	22.49	26.88	28.53	26.84	29.23	31.72	33.51	34.98
7	31.27	26.73	23.96	22.44	22.59	27.05	28.62	26.72	29.31	31.77	33.61	35.03
8	31.42	26.78	23.89	22.40	22.71	27.20	28.69	26.72	29.35	31.73	33.65	34.97
9	31.33	26.70	23.77	22.28	22.87	27.33	28.82	26.76	29.33	31.77	33.61	34.98
10	31.14	26.66	23.61	22.28	23.01	27.43	28.92	26.83	29.37	31.84	33.60	35.02
11	31.36	26.66	23.40	22.31	23.09	27.52	29.03	26.93	29.51	31.92	33.69	35.07
12	31.54	26.63	23.24	22.32	23.24	27.66	29.09	27.05	29.65	31.98	33.82	35.09
13	31.59	26.53	23.20	22.33	23.40	27.85	29.14	27.15	29.79	32.01	33.88	35.14
14	31.55	26.53	23.10	22.33	23.52	27.95	29.22	27.25	29.86	32.08	33.87	35.23
15	31.49	26.62	23.06	22.35	23.68	28.10	29.25	27.36	29.93	32.15	33.86	35.29
16	31.43	26.57	22.94	22.43	23.89	28.25	29.28	27.46	30.08	32.25	33.88	35.33
17	31.43	26.55	22.88	22.57	24.11	28.33	29.34	27.51	30.23	32.32	33.94	35.37
18	31.43	26.51	22.89	22.74	24.25	28.37	29.41	27.60	30.24	32.36	33.93	35.40
19	31.50	26.46	22.87	22.87	24.33	28.53	29.47	27.72	30.27	32.42	34.01	35.38
20	31.40	26.40	22.63	22.94	24.42	28.67	29.49	27.84	30.37	32.48	34.18	35.41
21	31.34	26.41	22.59	23.01	24.54	28.80	29.49	28.05	30.49	32.55	34.26	35.47
22	31.25	26.45	22.72	22.90	24.67	28.81	29.53	28.13	30.63	32.62	34.27	35.54
23	31.00	26.52	22.82	22.63	24.76	28.85	29.62	28.10	30.74	32.68	34.21	35.62
24	30.37	26.60	22.73	22.54	24.81	28.91	29.71	28.10	30.80	32.79	34.30	35.62
25	29.67	26.73	22.53	22.48	24.87	29.00	29.72	28.30	30.87	32.96	34.37	35.67
26	28.95	26.72	22.53	22.38	25.03	29.00	29.76	28.40	30.95	32.87	34.44	35.77
27	27.97	26.37	22.43	22.40	25.30	28.83	29.81	28.47	31.02	32.91	34.45	35.82
28	27.15	26.30	22.09	22.45	25.70	28.67	29.89	28.53	31.07	32.99	34.46	35.81
29	26.97	26.22	22.30	22.47	26.09	28.58	29.96	28.65	31.12	33.02	34.53	35.95
30	26.85	---	22.53	22.55	26.09	28.42	29.45	28.77	31.22	33.08	34.58	35.90
31	26.91	---	22.51	---	26.05	---	28.87	28.90	---	33.17	---	35.88
MEAN	30.51	26.55	23.40	22.49	23.94	27.90	29.18	27.70	30.04	32.24	33.91	35.31

CAL YR 1984 MEAN 28.61 HIGH 22.08 LOW 35.90

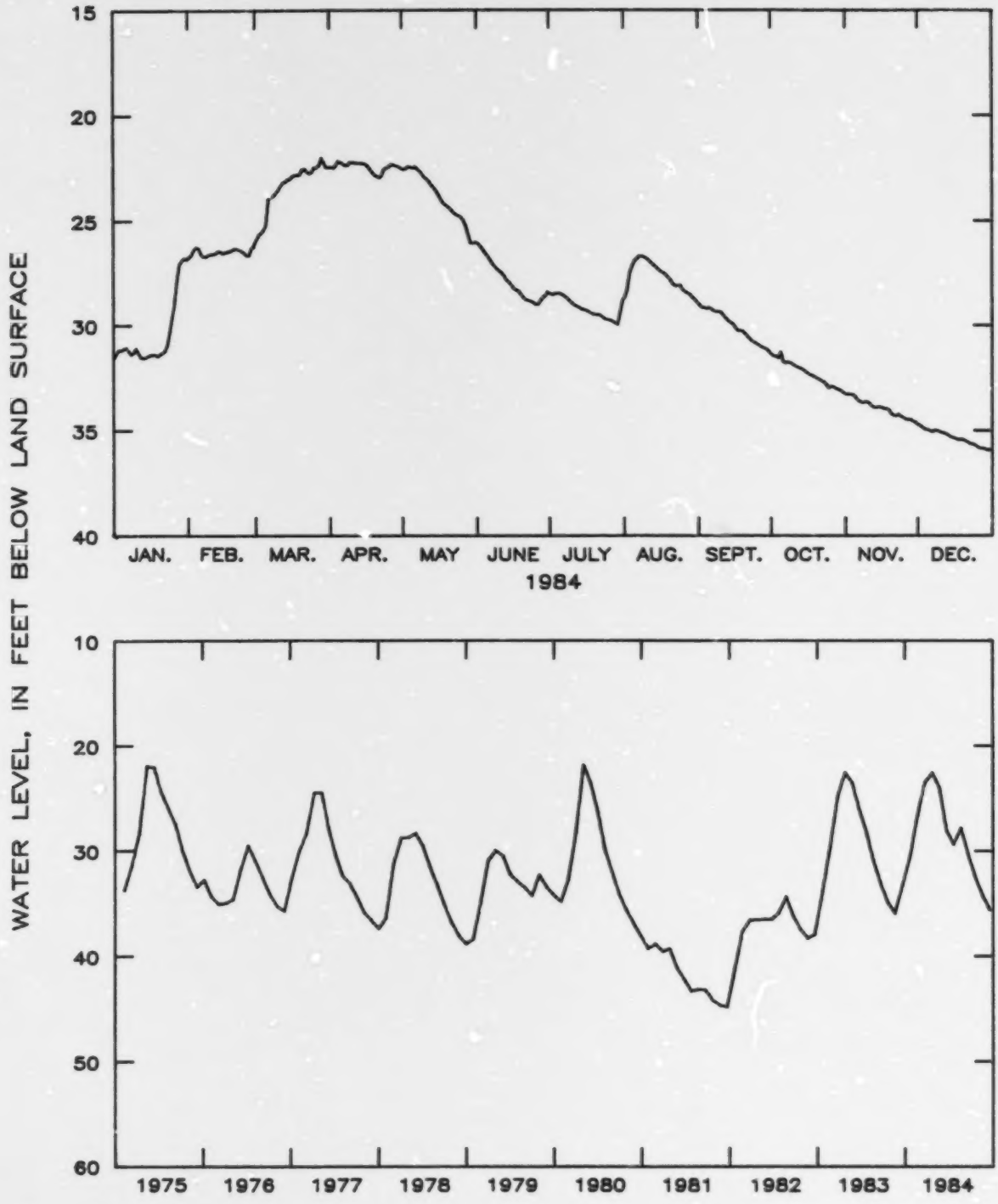

Figure 2.7.1–2.––Water level in observation well 13L003, Dougherty County.

13L012 TEST WELL 3 DOUGHERTY COUNTY

313105084064302 Local number, 13L012.
LOCATION.--Lat 31°31'05", long 84°06'43", Hydrologic Unit 03130008, about 6.5 mi southeast of Albany off U.S. Highway 19 on School Bus Road.
Owner: U.S. Geological Survey, test well 3.
AQUIFER.--Floridan aquifer system.
WELL CHARACTERISTICS.--Drilled unused observation well, depth 218 ft, cased to 54 ft.
DATUM.--Altitude of land-surface datum is 195 ft.
Measuring point: Floor of recorder shelter, 3.0 ft above land-surface datum.
REMARKS.--Water levels for periods of missing recorder record, March 8 to April 11, April 13-22, April 29 to May 3, July 28 to August 1, and October 10-16, were estimated.
PERIOD OF RECORD.--June 1977 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 21.92 ft below land-surface datum, March 2, 1979; lowest, 48.18 ft below land-surface datum, July 1, 1981.

Water level, in feet below land surface, through calendar year 1984 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	37.53	32.36	33.70	31.70	35.47	37.66	42.42	36.28	41.27	42.50	43.33	43.34
2	37.66	33.02	34.56	32.11	35.45	38.60	43.01	35.11	41.29	42.46	43.35	43.39
3	37.11	33.36	34.63	32.36	35.37	39.14	43.27	32.43	41.16	42.41	43.20	43.40
4	37.53	34.22	34.56	32.52	35.46	39.33	43.04	33.54	40.73	42.80	43.16	43.47
5	37.91	34.79	34.61	32.94	33.95	39.58	42.90	33.98	40.10	43.01	43.17	43.36
6	38.17	35.54	28.20	33.39	33.94	40.09	42.77	34.76	40.14	42.95	43.20	43.11
7	38.64	35.81	24.07	33.82	35.21	40.39	42.64	35.23	40.25	42.65	43.23	42.85
8	39.10	36.08	24.36	34.15	36.18	40.62	42.46	36.05	40.37	42.15	43.27	42.64
9	39.06	36.27	24.61	34.39	36.63	40.73	42.23	36.65	40.48	42.02	43.24	42.84
10	39.09	36.56	24.81	34.75	36.79	40.64	41.93	37.57	40.60	42.11	43.26	43.07
11	38.99	36.73	24.96	35.15	36.69	40.73	41.67	38.30	40.81	42.19	43.30	42.99
12	39.28	36.92	25.17	35.52	37.22	41.06	41.65	38.75	41.25	42.28	43.29	42.68
13	39.48	36.54	25.49	35.49	37.78	41.31	42.18	36.95	41.44	42.36	43.06	42.55
14	39.25	36.16	25.86	35.45	38.11	41.52	42.05	39.10	41.47	42.45	42.91	42.76
15	39.12	36.30	26.08	35.42	38.43	41.55	42.00	39.28	41.50	42.54	42.77	43.06
16	39.12	34.22	26.32	35.43	38.69	41.52	41.70	39.49	41.98	42.62	42.79	43.14
17	39.17	35.81	26.63	35.49	38.94	41.26	41.46	39.69	42.12	42.71	42.91	43.10
18	39.15	35.72	27.00	35.55	39.16	41.12	41.67	40.01	41.94	42.66	43.03	43.06
19	35.36	35.75	27.34	35.53	39.41	41.29	41.96	40.09	41.99	42.73	43.16	43.07
20	38.07	35.08	27.47	35.49	39.43	41.59	42.33	40.02	42.21	42.75	43.14	42.98
21	38.27	35.69	27.79	35.46	39.45	41.66	42.66	40.19	42.30	42.78	43.10	42.79
22	36.74	36.22	28.28	35.42	39.67	41.43	42.43	40.22	42.48	42.83	43.09	42.70
23	37.34	36.57	28.75	35.31	39.53	41.32	42.43	40.14	42.52	42.86	42.99	42.65
24	35.57	36.99	29.02	35.24	39.53	41.26	42.41	39.99	42.52	43.07	43.21	42.72
25	21.40	37.24	29.19	35.07	39.45	41.29	42.27	39.96	42.75	43.16	43.36	42.77
26	31.43	37.59	29.55	35.14	39.52	41.47	42.13	40.23	42.85	43.15	43.47	42.69
27	29.17	36.52	29.81	35.44	39.41	41.29	42.15	40.39	43.05	43.10	43.38	42.60
28	27.18	35.19	29.93	35.52	39.15	41.14	40.98	40.50	42.99	43.17	43.25	42.68
29	29.19	34.32	30.41	35.49	38.04	41.68	39.80	40.97	42.57	43.14	43.04	42.50
30	30.23	---	31.00	35.49	37.16	42.73	38.96	41.25	42.63	43.12	43.15	42.72
31	31.63	---	31.35	---	36.40	---	37.46	41.33	---	43.22	---	42.78
MEAN	36.46	35.73	28.56	34.67	37.60	40.83	41.90	38.40	41.67	42.71	43.16	42.92

CAL YR 1984 MEAN 39.72 HIGH 24.07 LOW 43.47

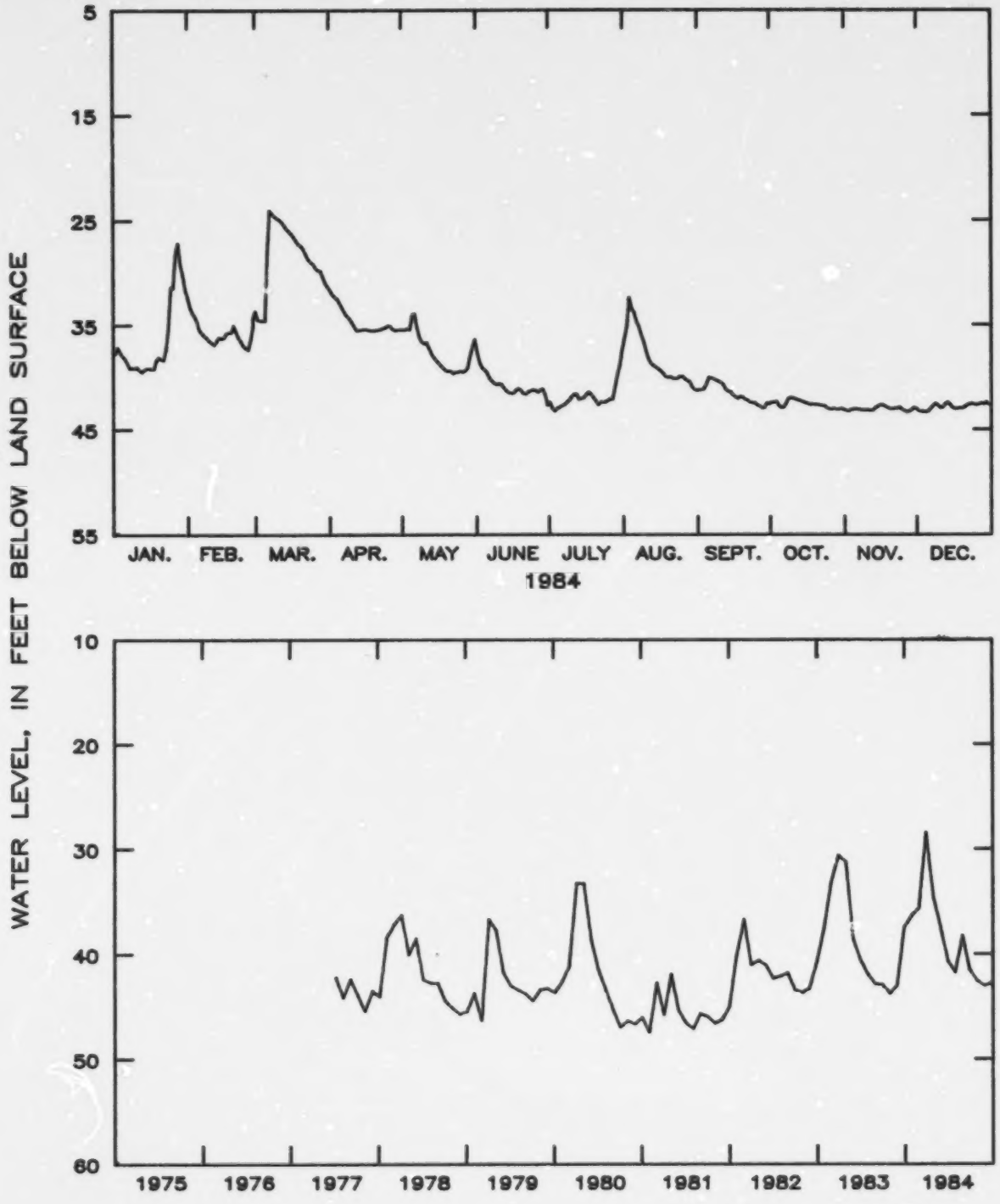

Figure 2.7.1–3.––Water level in observation well 13L012, Dougherty County.

13J004 WRIGHT MITCHELL COUNTY

312127084065801 Local number, 13J004.
LOCATION.--Lat 31°21'27", long 84°06'58", Hydrologic Unit 03130008, turn left at intersection of U.S. Highway 19 and State Highway 93, go 2.7 mi and turn right at red barn.
Owner: Henry Wright.
AQUIFER.--Floridan aquifer system.
WELL CHARACTERISTICS.--Drilled unused observation well, diameter 12 in., depth 208 ft, cased to 77 ft, open hole.
DATUM.--Altitude of land-surface datum is 200 ft.
Measuring point: Top of front edge of shelter, 3.60 ft above land-surface datum.
REMARKS.--None.
PERIOD OF RECORD.--June 1978 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 36.90 ft below land-surface datum, April 13, 1980; lowest, 54.00 ft below land-surface datum, September 25, 1981.

Water level, in feet below land surface, through calendar year 1984 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	44.90	40.85	40.00	38.20	37.54	38.63	41.15	39.60	39.75	42.06	43.42	44.32
2	44.54	40.74	39.83	38.18	37.63	38.69	40.92	39.45	39.85	42.62	43.33	44.38
3	44.50	40.52	39.73	38.00	37.13	38.82	40.96	38.91	39.41	42.09	43.25	44.48
4	44.40	40.45	39.75	37.82	37.25	39.08	40.95	38.41	39.75	42.01	43.25	44.57
5	44.24	40.48	39.55	37.63	37.50	39.30	40.96	38.33	39.56	42.07	43.40	44.42
6	44.24	40.68	39.15	37.62	37.97	39.81	41.10	38.30	39.63	42.19	43.59	44.56
7	44.44	40.80	39.63	37.68	38.40	40.14	41.12	38.45	39.70	42.23	43.72	44.78
8	44.66	40.87	39.32	37.66	38.20	40.32	41.22	38.37	39.72	42.19	43.75	44.65
9	44.64	40.87	38.07	37.50	38.00	40.60	41.30	38.50	39.60	42.20	43.64	44.62
10	44.35	41.16	38.00	37.38	38.05	40.27	42.48	38.62	40.01	42.30	43.50	44.55
11	44.50	41.25	37.92	37.35	38.10	40.60	42.40	38.70	40.35	42.37	43.58	44.55
12	44.82	41.17	37.85	37.36	38.20	40.89	42.08	38.86	40.94	42.35	43.73	44.58
13	44.90	40.82	37.80	37.37	38.68	41.09	41.94	39.02	41.02	42.25	43.90	44.70
14	44.86	40.70	37.92	37.38	38.37	40.73	41.96	39.15	40.60	42.25	43.95	44.87
15	44.76	40.64	38.02	37.34	39.01	40.70	41.91	39.22	40.57	42.35	43.87	44.92
16	44.63	40.50	37.97	37.35	39.30	40.75	41.82	39.30	40.80	42.50	43.80	44.92
17	44.67	40.42	37.93	37.46	39.56	40.75	41.78	39.38	41.33	42.60	43.85	44.90
18	44.60	40.45	37.95	37.65	39.83	40.75	41.85	39.65	41.42	42.69	43.71	45.26
19	44.63	40.45	37.95	37.90	39.58	40.99	41.93	40.27	41.03	42.70	43.74	45.13
20	44.58	40.52	37.80	38.04	39.25	41.64	41.82	40.60	41.56	42.80	44.06	44.82
21	44.55	40.54	37.80	38.14	39.34	41.74	41.63	40.15	41.15	42.80	44.18	44.78
22	44.20	40.57	37.98	38.24	39.58	41.40	41.00	39.90	41.66	42.89	44.16	44.84
23	44.18	40.65	38.10	38.28	39.45	41.28	41.08	39.63	41.43	43.00	44.02	44.94
24	43.54	40.74	38.12	37.75	39.47	41.25	41.16	39.40	41.82	43.10	44.02	44.94
25	43.46	40.80	38.04	37.26	39.37	41.31	41.14	39.16	42.04	43.24	44.05	45.08
26	43.03	40.80	38.03	37.16	39.38	41.72	41.10	38.90	41.90	43.24	44.12	45.20
27	42.50	40.50	38.06	37.20	39.41	42.09	41.12	38.70	41.55	43.20	44.08	45.18
28	41.98	40.22	37.92	37.17	39.45	42.49	41.56	38.70	41.49	43.28	44.10	45.12
29	41.38	40.08	37.49	37.25	39.42	41.94	41.22	38.80	41.55	43.29	44.22	45.08
30	41.02	---	38.15	37.23	39.08	41.56	40.73	38.89	42.10	43.30	44.20	45.13
31	40.87	---	38.23	---	38.77	---	40.03	39.80	---	43.40	---	45.06
MEAN	43.95	40.67	38.55	37.62	38.73	40.71	41.41	39.13	40.79	42.65	43.81	44.82

CAL YR 1984 MEAN 41.06 HIGH 37.13 LOW 45.26

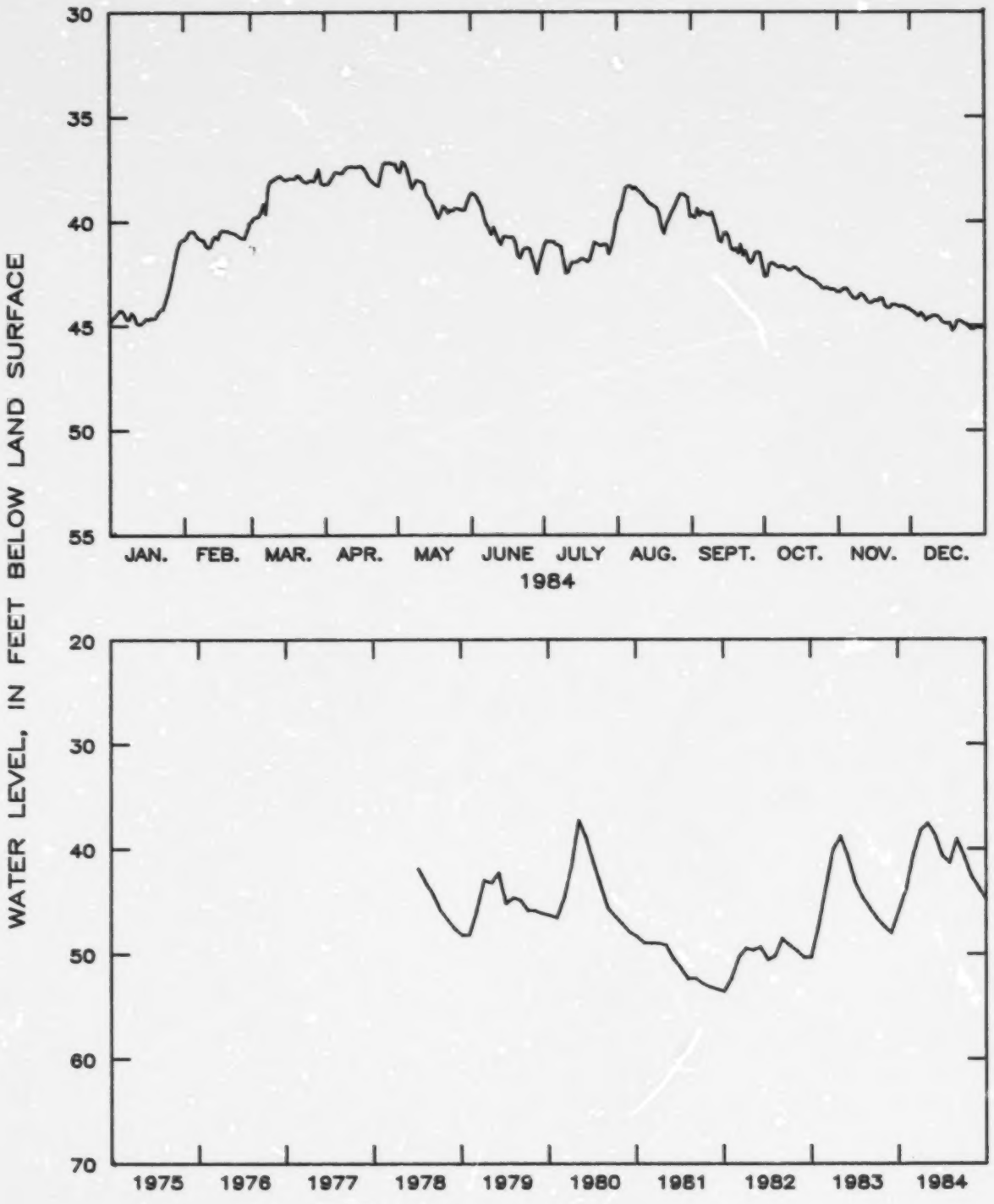

Figure 2.7.1–4.––Water level in observation well 13J004, Mitchell County.

10G313 MEINDERS MITCHELL COUNTY

310507084262201 Local number, 10G313.
LOCATION.--Lat 31°05'07", long 84°26'22", Hydrologic Unit 03130008, 1.95 mi west of Vada off of Decatur-Mitchell County line road, on right.
Owner: Harvey Meinders.
AQUIFER.--Floridan aquifer system.
WELL CHARACTERISTICS.--Cable-tooled unused observation well, diameter 12 in., depth 250 ft, cased to 87 ft, open hole.
DATUM.--Altitude of land-surface datum is 14.8 ft.
Measuring point: Floor of recorder shelter, 1.35 ft above land-surface datum.
REMARKS.--Water levels for period of missing recorder record, March 9 to April 1, were estimated.
PERIOD OF RECORD.--November 1961 to September 1968; April 1976 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 32.98 ft below land-surface datum, April 9, 1984; lowest, 60.26 ft below land-surface datum, January 1, 1982.

Water level, in feet below land surface, through calendar year 1984 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	47.39	45.19	41.76	33.91	34.91	38.11	41.62	42.14	41.02	43.51	46.07	48.26
2	47.37	45.10	41.10	33.83	34.90	38.17	41.72	41.96	41.10	43.59	46.11	48.32
3	47.36	44.69	40.36	33.76	34.86	38.25	41.73	41.72	41.13	43.64	46.16	48.41
4	47.19	44.45	40.79	33.53	35.16	38.38	41.75	41.53	41.22	43.72	46.24	48.47
5	47.38	44.73	40.54	33.47	35.44	38.53	41.90	41.41	41.26	43.81	46.34	48.49
6	47.53	44.32	39.44	33.34	35.57	38.64	41.88	41.28	41.29	43.92	46.46	48.62
7	47.58	44.13	37.45	33.27	35.70	38.74	41.96	41.15	41.34	43.99	46.55	48.69
8	47.60	44.01	36.53	33.13	35.78	38.84	42.05	41.07	41.37	44.05	46.62	48.73
9	47.53	43.79	35.94	32.98	35.95	38.96	42.15	41.05	41.33	44.13	46.66	48.79
10	47.37	43.63	35.50	33.06	36.11	39.10	42.28	40.99	41.40	44.23	46.69	48.83
11	47.53	43.48	35.15	33.14	36.22	39.23	42.42	40.95	41.52	44.33	46.80	48.90
12	47.58	43.33	34.56	33.16	36.37	39.39	42.51	40.96	41.61	44.40	46.91	48.96
13	47.57	43.18	34.68	33.18	36.51	39.52	42.60	40.97	41.71	44.45	47.01	49.05
14	47.55	43.13	34.62	33.22	36.61	39.67	42.69	41.01	41.78	44.52	47.08	49.16
15	47.51	43.05	34.49	33.28	36.74	39.77	42.73	41.05	41.88	44.62	47.14	49.21
16	47.47	42.95	34.35	33.43	36.92	39.88	42.76	41.06	42.05	44.74	47.19	49.26
17	47.51	42.78	34.26	33.60	37.04	39.96	42.82	41.07	42.18	44.84	47.26	49.32
18	47.47	42.64	34.18	33.84	37.14	40.08	42.90	41.11	42.22	44.91	47.29	49.37
19	47.56	42.52	34.12	34.00	37.20	40.22	42.93	41.14	42.27	44.99	47.37	49.42
20	47.52	42.41	34.02	34.14	37.35	40.35	42.95	41.20	42.35	45.06	47.56	49.48
21	47.51	42.29	34.12	34.26	37.47	40.52	42.90	41.30	42.48	45.15	47.63	49.54
22	47.47	42.20	34.16	34.31	37.59	40.60	42.87	41.30	42.64	45.25	47.68	49.60
23	47.33	42.17	34.14	34.36	37.62	40.69	42.94	41.23	42.74	45.33	47.71	49.67
24	47.23	42.12	34.09	34.59	37.69	40.80	42.98	41.27	42.80	45.42	47.78	49.73
25	47.22	42.12	34.04	34.72	37.78	40.89	43.03	41.36	42.86	45.52	47.85	49.81
26	47.16	42.03	34.10	34.72	37.90	41.03	43.06	41.29	42.97	45.58	47.93	49.88
27	47.00	41.78	34.00	34.70	38.00	41.17	43.11	41.13	43.09	45.65	47.97	49.93
28	46.81	41.76	33.86	34.74	38.04	41.34	43.19	41.03	43.15	45.75	48.05	49.98
29	46.25	41.60	34.00	34.75	38.04	41.40	43.23	40.98	43.25	45.83	48.11	50.03
30	45.93	---	34.02	34.81	38.04	41.49	43.11	40.95	43.37	45.92	48.17	50.09
31	45.69	---	33.96	---	38.06	---	42.55	40.97	---	46.02	---	50.13
MEAN	47.13	43.15	35.77	33.84	36.73	39.79	42.56	41.21	42.05	44.74	47.15	49.23

CAL YR 1984 MEAN 41.97 HIGH 32.98 LOW 50.13

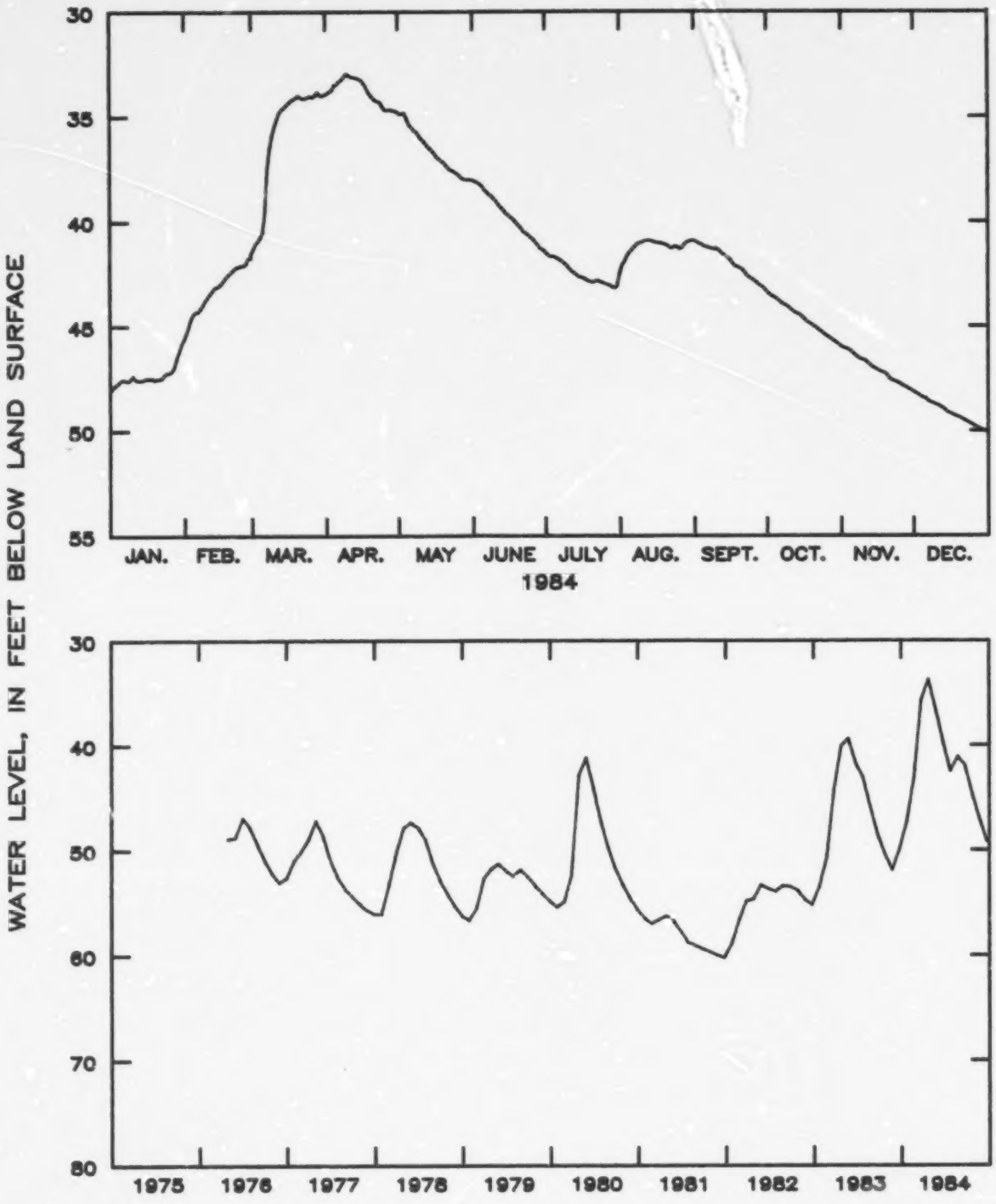

Figure 2.7.1–5.––Water level in observation well 10G313, Mitchell County.

09F520 BOLTON DECATUR COUNTY

305736084355801 Local number, 09F520.
LOCATION.--Lat 30°57'40", long 84°35'46", Hydrologic Unit 03130008, U.S. Highway 27 north of Bainbridge, right on dirt road near John Deere tractor dealership.
Owner: Graham Bolton.
AQUIFER.--Floridan aquifer system.
WELL CHARACTERISTICS.--Unused private irrigation well, diameter 12 in., depth 251 ft, cased to 130 ft, open hole.
DATUM.--Altitude of land-surface datum is 128 ft.
Measuring point: Floor of recorder shelter, 3.50 ft above land-surface datum.
REMARKS.--This well is about 15 ft from pumped well. Water levels for periods of missing recorder record, June 14 to August 27, were estimated.
PERIOD OF RECORD.--June 1969 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 34.86 ft below land-surface datum, April 15, 1984; lowest, 54.78 ft below land-surface datum, August 20, 1981.

Water level, in feet below land surface, through calendar year 1984 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	44.33	42.76	41.79	35.83	35.84	37.13	44.88	42.26	40.57	41.77	43.49	45.23
2	44.33	42.63	41.29	35.77	39.15	37.14	44.62	42.07	40.65	41.83	43.53	45.27
3	44.28	42.47	41.22	35.68	37.67	38.95	44.63	41.50	40.66	41.78	43.57	45.33
4	44.22	42.40	41.13	35.52	36.13	41.51	44.58	40.96	40.71	41.78	43.63	45.37
5	44.17	42.36	41.01	35.42	41.01	37.74	44.56	40.85	40.73	41.84	43.69	45.40
6	44.14	42.41	40.20	35.29	36.96	40.09	44.66	40.78	40.72	41.91	43.77	45.47
7	44.16	42.37	39.39	35.21	36.44	41.10	44.65	40.90	40.72	41.96	43.84	45.53
8	44.17	42.33	37.93	35.10	36.45	38.12	44.71	40.78	40.71	42.01	43.89	45.55
9	44.14	42.23	37.36	35.00	36.52	40.19	45.26	40.88	40.66	42.07	43.92	45.58
10	44.09	42.24	36.94	35.02	36.63	42.07	45.90	40.97	40.66	42.13	43.95	45.60
11	44.19	42.20	36.61	34.98	39.52	38.49	45.79	41.01	40.70	42.21	44.03	45.65
12	44.22	42.17	36.35	34.93	39.82	40.85	45.43	41.14	40.74	42.27	44.10	45.69
13	44.23	42.12	36.19	34.89	37.02	45.45	45.26	41.26	40.79	42.30	44.16	45.75
14	44.22	42.12	36.13	34.87	37.15	45.06	45.24	41.36	43.32	42.36	44.22	45.81
15	44.20	42.07	36.03	34.86	39.48	44.99	45.16	41.39	44.24	42.44	44.27	45.84
16	44.17	42.00	35.92	34.91	40.81	45.01	45.03	41.44	41.14	42.51	44.32	45.85
17	44.18	41.95	35.85	34.97	37.52	44.97	44.96	41.48	41.14	42.57	44.37	45.87
18	44.15	41.88	35.80	35.07	39.25	44.94	44.89	41.72	41.15	42.63	44.40	45.89
19	44.21	41.82	35.76	35.13	41.68	45.14	45.04	42.75	41.15	42.69	44.46	45.93
20	44.19	41.76	35.68	35.18	37.87	45.76	44.89	42.60	41.18	42.75	44.70	45.98
21	44.13	41.70	35.80	35.21	37.91	45.82	44.47	42.11	41.27	42.81	44.75	46.00
22	44.14	41.65	35.86	35.22	38.02	45.45	44.01	41.83	41.32	42.88	44.80	46.03
23	44.06	41.64	35.86	35.25	38.01	45.29	44.05	41.52	41.35	42.95	44.83	46.07
24	44.00	41.61	35.84	35.39	38.02	45.23	44.10	41.26	41.38	43.01	44.88	46.10
25	43.98	41.62	35.81	35.46	37.92	45.25	44.04	40.98	41.43	44.19	44.92	46.15
26	43.92	41.58	35.89	35.51	37.78	45.63	43.97	41.69	41.48	43.15	44.96	46.18
27	43.77	41.50	35.81	35.56	37.71	45.96	43.95	40.45	41.53	43.21	45.01	46.23
28	43.51	41.53	35.67	35.44	37.62	46.33	44.36	40.42	41.59	43.27	45.07	46.25
29	43.22	41.48	35.55	35.69	37.49	45.74	43.98	40.44	41.64	43.32	45.11	46.28
30	43.04	---	35.30	35.75	37.35	45.13	43.46	40.45	41.69	43.38	45.15	46.31
31	42.90	---	35.86	---	37.20	---	42.72	40.47	---	43.44	---	46.34
MEAN	44.03	42.02	37.16	35.28	38.00	43.02	44.62	41.28	41.23	42.56	44.33	45.82

CAL YR 1984 MEAN 41.62 HIGH 34.86 LOW 46.34

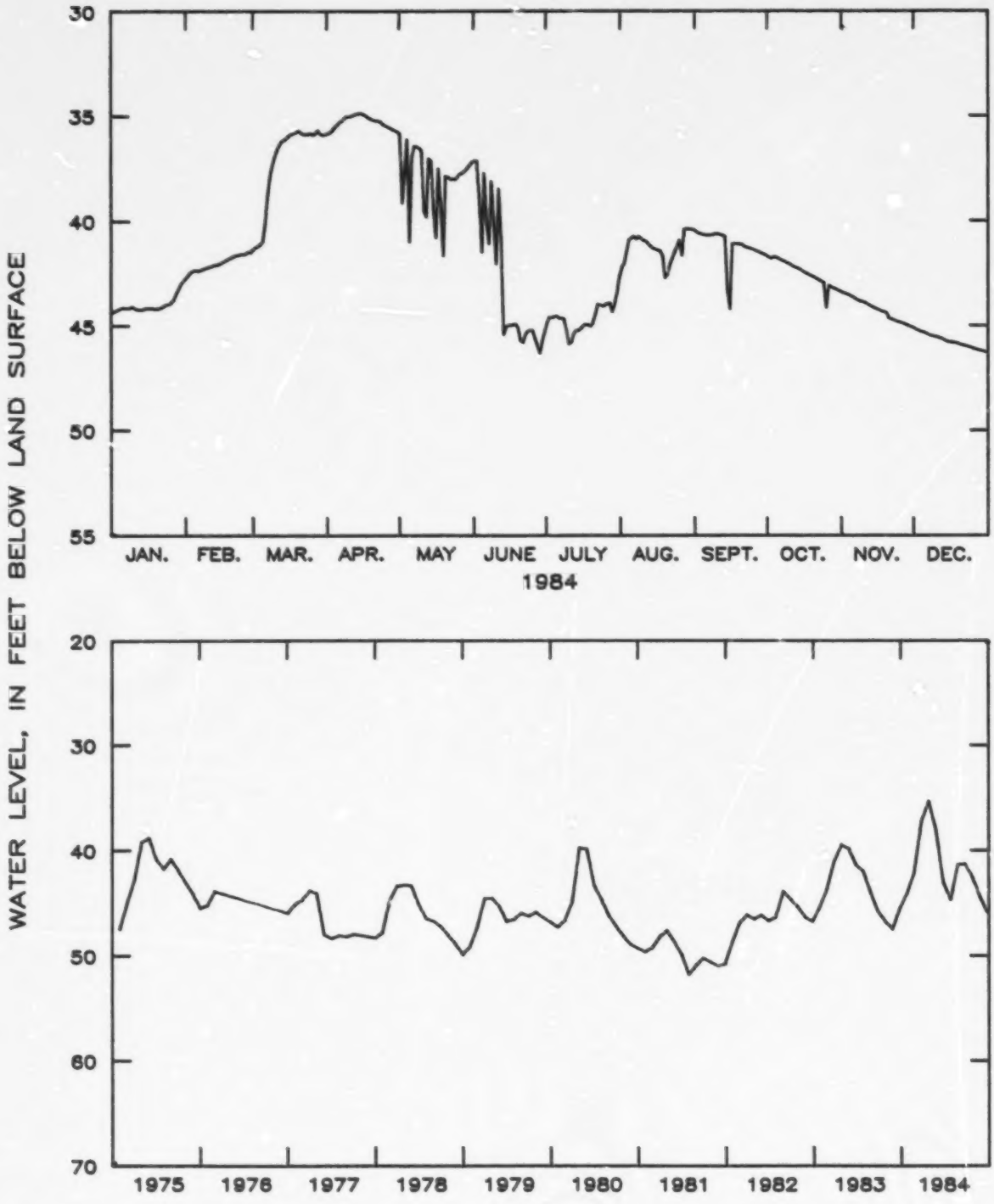

Figure 2.7.1—6.——Water level in observation well 09F520, Decatur County.

08G001 FLEET MILLER COUNTY

310651084404501 Local number, 08G001.
LOCATION.--Lat 31°06'51", long 84°40'45", Hydrologic Unit 03130010, 1 mi northeast of Boykin, Ga.
Owner: Jack Fleet.
AQUIFER.--Floridan aquifer system.
WELL CHARACTERISTICS.--Drilled unused irrigation well, diameter 14 in., depth 255 ft, cased to 130 ft, open hole.
DATUM.--Altitude of land-surface datum is 150 ft.
Measuring point: Top front edge of recorder shelter, 3.0 ft above land-surface datum.
REMARKS.--None.
PERIOD OF RECORD.--February 1977 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 11.18 ft below land-surface datum, April 11, 1984; lowest, 43.88 ft below land-surface datum, July 17, 1981.

Water level, in feet below land surface, through calendar year 1984 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	20.72	15.16	15.32	12.98	14.48	21.14	25.12	25.16	25.70	29.63	34.20	35.24
2	20.70	15.23	15.65	13.36	14.69	22.40	26.20	24.25	25.92	29.69	35.26	35.30
3	20.68	15.30	15.68	13.22	14.74	21.30	26.22	22.45	26.53	29.74	34.45	35.42
4	20.65	15.44	15.59	13.00	15.3[illegible]	22.56	26.22	20.53	26.36	29.38	33.70	35.48
5	20.66	15.65	15.54	12.64	15.76	23.64	26.25	19.68	26.18	30.05	33.57	35.43
6	20.72	15.85	14.43	12.38	15.48	23.57	26.33	19.47	26.26	30.30	33.66	35.55
7	20.90	16.03	13.00	12.32	16.06	24.60	26.43	19.58	26.35	30.45	33.74	35.68
8	21.08	16.17	12.52	12.35	16.70	25.03	26.60	19.80	26.40	31.27	33.84	35.68
9	21.20	16.30	12.50	11.90	16.46	26.05	27.70	20.67	26.38	32.36	33.88	35.72
10	21.18	16.44	12.57	11.30	16.50	26.84	28.23	21.34	26.47	32.50	33.86	35.72
11	21.44	16.58	12.63	11.18	17.18	26.74	27.52	20.93	26.62	32.20	33.95	35.80
12	21.72	16.70	12.80	11.26	17.96	25.67	27.47	21.22	27.42	32.42	34.15	35.87
13	21.90	16.70	12.93	11.40	17.46	25.25	27.38	22.00	28.24	31.73	34.28	35.98
14	22.05	16.55	13.10	11.60	17.56	25.43	27.56	22.05	27.70	31.44	34.35	36.08
15	22.18	16.32	13.25	11.78	18.40	26.78	27.67	22.70	27.42	31.54	34.40	36.18
16	22.30	16.08	13.36	11.98	18.81	26.18	27.48	23.94	27.53	31.63	34.43	36.22
17	22.48	15.88	13.50	12.15	19.36	25.64	27.50	23.85	27.72	31.68	34.58	36.26
18	22.63	15.74	13.64	12.32	19.90	25.92	27.33	24.20	27.82	31.73	34.70	36.32
19	22.75	15.72	13.75	12.47	19.45	26.52	26.88	23.94	27.95	31.80	34.62	36.38
20	22.56	15.72	13.85	12.62	19.76	27.43	26.53	23.98	28.17	31.93	34.74	36.47
21	22.30	15.80	14.00	12.78	19.60	27.68	26.35	24.12	28.50	32.03	34.82	36.62
22	21.97	15.87	14.14	12.90	19.47	29.10	26.18	24.23	28.78	32.24	34.85	36.72
23	21.56	16.00	14.26	13.03	19.48	27.96	26.17	24.29	28.92	32.30	34.86	36.72
24	21.18	16.16	14.36	13.22	19.55	27.03	26.17	24.45	28.93	32.35	34.93	36.76
25	20.80	16.28	14.50	13.65	19.65	26.34	26.20	24.62	29.10	32.44	34.98	36.82
26	20.22	16.33	14.63	13.80	19.77	26.03	26.25	24.77	29.28	32.60	35.06	36.88
27	19.78	16.35	14.48	13.78	19.89	26.05	27.15	24.86	29.33	32.76	35.12	36.90
28	16.70	16.24	13.85	13.94	20.10	26.10	28.00	24.97	29.60	32.88	35.15	36.92
29	15.45	16.02	13.25	14.12	20.28	26.04	27.22	25.08	29.48	32.88	35.12	36.96
30	15.11	---	13.03	14.33	20.32	26.03	26.70	25.26	29.58	32.93	35.14	37.02
31	15.12	---	13.12	---	20.35	---	26.03	25.42	---	33.03	---	37.20
MEAN	20.64	16.02	13.96	12.66	19.08	25.69	26.84	23.03	27.68	31.89	34.48	36.20

CAL YR 1984 MEAN 23.94 HIGH 11.18 LOW 37.20

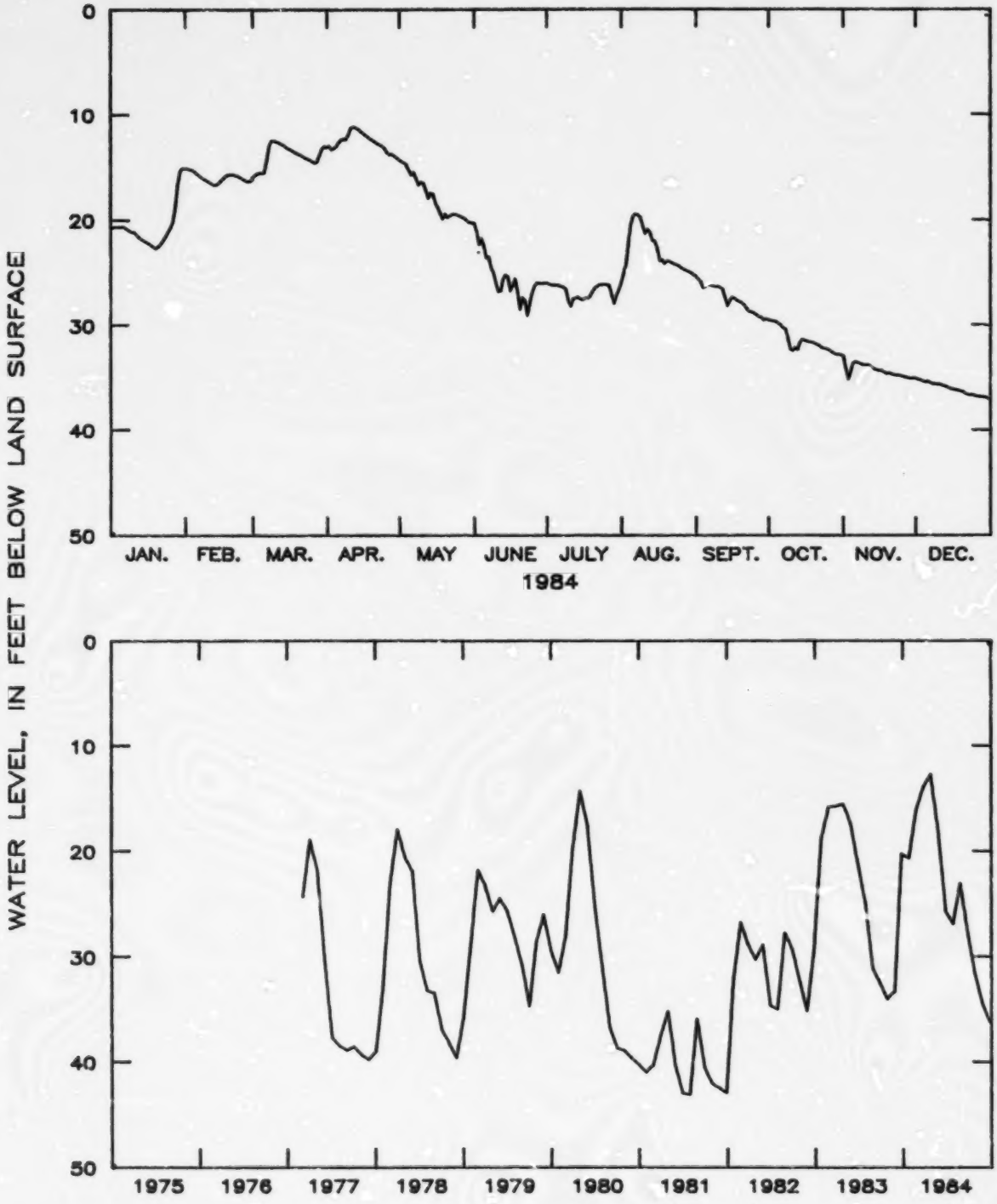

Figure 2.7.1–7.––Water level in observation well 08G001, Miller County.

06F001 RODDENBERRY FARMS TW 1 SEMINOLE COUNTY

305356084534601 Local number, 06F001.
LOCATION.--Lat 30°53'49", long 84°53'55", Hydrologic Unit 03130004, go 0.5 mi south from Donalsonville on State Highway 39, turn right onto State Highway 91 to 3rd road on left, go 7.3 mi south to Hebrew Church. Recorder is 0.64 mi south of Hebrew Church on left, in field 0.6 mi from road.
Owner: Roddenberry Company
AQUIFER.--Floridan aquifer system.
WELL CHARACTERISTICS.--Drilled unused observation well, diameter 4 in., depth 150 ft, cased to 98.5 ft, open hole.
DATUM.--Altitude of land-surface datum is 110 ft.
Measuring point: Top of front edge of shelter, 3.14 ft above land-surface datum.
REMARKS.--Borehole geophysical survey conducted August 10, 1983. Water levels for periods of missing recorder record, March 7-29, April 15 to May 1, and September 29-30, were estimated.
PERIOD OF RECORD.--March 1979 to July 1982, August 1983 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 4.13 ft below land-surface datum, March 8, 1984; lowest, 35.53 ft below land-surface datum, December 9, 1981.

Water level, in feet below land surface, through calendar year 1984 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	17.34	10.56	11.03	8.49	10.29	21.55	27.75	18.62	23.17	27.38	30.38	32.01
2	17.43	11.01	11.07	8.67	10.43	23.04	27.03	15.78	23.58	27.53	30.39	32.04
3	17.55	11.31	11.29	8.65	12.64	23.42	25.38	14.53	24.10	27.66	30.38	32.10
4	17.72	11.32	11.52	7.77	13.30	23.08	24.80	14.39	23.91	27.77	30.40	32.15
5	17.62	11.46	11.31	7.32	13.71	24.01	24.62	14.82	23.17	27.88	30.46	32.13
6	18.06	11.86	5.72	7.25	14.79	24.71	24.63	15.47	21.28	28.05	30.57	32.23
7	18.51	12.19	4.45	7.38	14.69	25.70	24.75	16.11	20.51	28.20	30.68	32.30
8	18.96	12.48	4.13	7.52	15.41	25.76	24.93	16.77	20.20	28.26	30.72	32.28
9	19.21	12.71	4.27	7.14	15.19	26.19	25.17	17.49	20.61	28.29	30.75	32.29
10	19.15	13.00	4.50	6.87	15.75	26.17	25.45	18.28	20.94	28.36	30.73	32.27
11	19.67	13.30	4.77	6.86	17.20	25.67	25.71	19.67	20.85	28.49	30.77	32.29
12	20.13	13.67	5.06	6.96	17.51	26.44	25.79	19.35	21.17	28.63	30.86	32.31
13	20.43	13.19	5.35	7.08	16.88	26.93	26.40	19.60	22.19	28.74	30.95	32.36
14	20.64	12.49	5.66	7.13	17.01	26.49	27.17	19.95	23.43	28.80	31.00	32.43
15	20.79	12.12	5.99	7.37	17.11	26.61	27.16	20.43	23.40	28.97	31.04	32.45
16	20.89	11.95	6.26	7.54	17.68	27.51	27.04	21.07	23.54	29.06	31.06	32.45
17	21.13	12.02	6.56	7.73	19.45	27.35	27.04	21.28	23.70	29.20	31.15	32.46
18	21.22	12.17	6.86	7.92	19.69	27.59	26.93	21.53	24.18	29.26	31.18	32.48
19	19.96	12.43	7.13	8.08	19.31	27.75	26.08	21.83	24.47	29.36	31.25	32.50
20	18.86	12.72	7.39	8.25	19.08	28.02	25.70	21.97	25.33	29.49	31.38	32.55
21	18.35	13.02	7.70	8.43	19.19	28.20	25.33	22.50	25.72	29.59	31.46	32.59
22	18.10	13.31	8.00	8.56	19.87	28.02	25.13	23.12	25.40	29.77	31.49	32.62
23	17.96	13.61	8.28	8.71	19.76	27.81	25.19	22.99	25.65	29.85	31.48	32.63
24	17.54	13.99	8.55	8.92	19.97	27.65	25.35	22.39	26.76	29.90	31.51	32.64
25	17.19	14.27	8.85	9.36	20.73	27.53	25.51	21.77	26.62	30.01	31.54	32.69
26	16.68	14.51	9.14	9.53	20.81	27.46	25.56	21.75	26.43	30.15	31.59	32.74
27	13.34	13.49	9.15	9.53	20.56	27.51	25.64	21.79	27.11	30.15	31.59	32.75
28	9.94	11.60	8.98	9.70	20.53	27.80	25.77	21.88	27.41	30.19	31.65	32.75
29	9.78	11.13	8.24	9.90	20.44	28.03	25.77	22.03	27.40	30.24	31.94	32.77
30	9.55	---	8.13	10.13	20.44	27.87	24.37	22.25	27.39	30.29	31.96	32.78
31	10.11	---	7.72	---	20.84	---	21.19	22.49	---	30.33	---	32.78
MEAN	17.93	12.51	7.53	8.16	17.44	26.40	25.63	19.80	23.75	29.03	31.08	32.45

CAL YR 1984 MEAN 20.96 HIGH 4.13 LOW 32.78

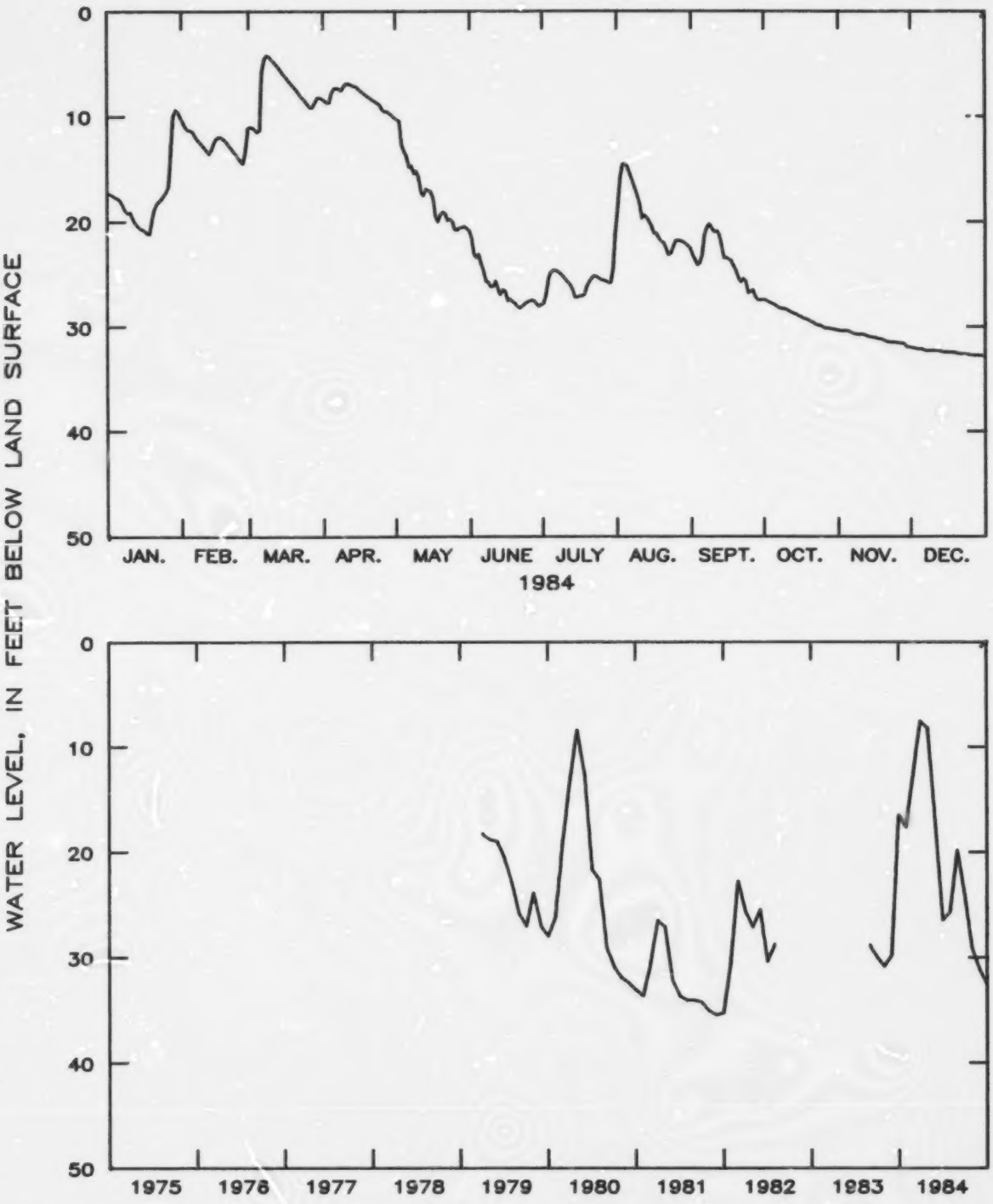

Figure 2.7.1—8——Water level in observation well 06F001, Seminole County.

2.7.2 South-central area

Ground-water levels in the Floridan aquifer system in south-central Georgia are affected by precipitation, recharge, and pumping. Water levels in Worth, Tift, and Cook Counties began to decline in 1977 due to increased irrigation pumping. The decline accelerated during the 1980-81 drought. Irrigation pumping decreased as a result of above-normal precipitation during 1982-83 and water levels began to recover. Irrigation pumping increased during 1984 and mean annual water levels in Worth, Tift, and Cook Counties were from 1.2 feet lower to 0.5 foot higher in 1984 than in 1983.

Ground-water levels in the Valdosta area are controlled mainly by local recharge. The highest water levels are north of the city, where the Floridan aquifer system receives recharge from the Withlacoochee River. The river flows into sinkholes and cave openings in the aquifer system and water levels respond to this recharge. Increased precipitation and streamflow in winter and early spring cause high ground-water levels. Decreased precipitation and increased evapotranspiration in summer and autumn result in low streamflow and correspondingly low ground-water levels. Mean annual water levels in the Valdosta area were from 0.3 foot lower to 0.6 foot higher in 1984 than in 1983. A new record high was reached at well 19F039 in April 1984.

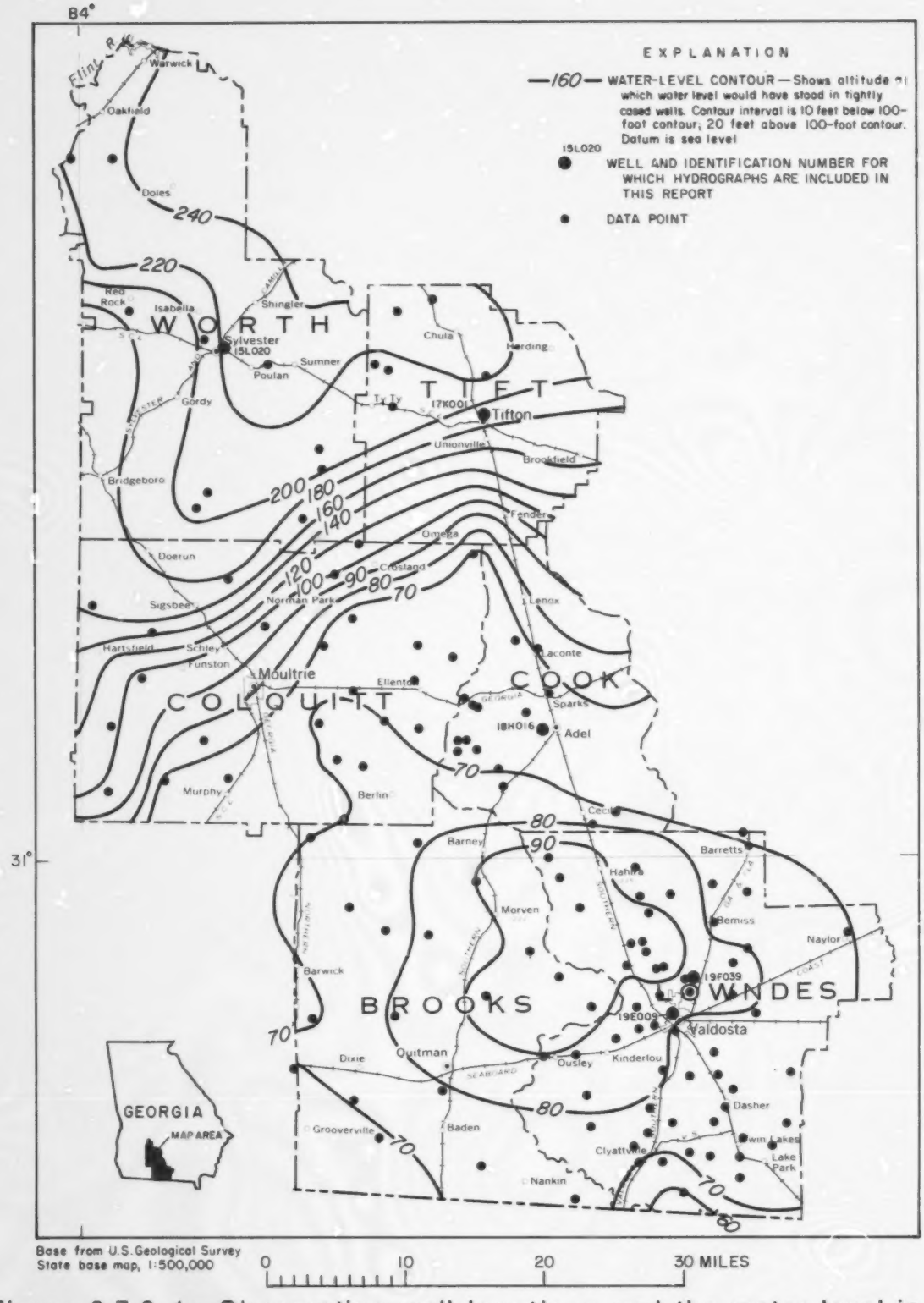

Figure 2.7.2-1.—Observation well locations and the water level in the Floridan aquifer system in the south-central area, November 1982.

15L020 SYLVESTER WORTH COUNTY

313146083491601 Local number, 15L020.
LOCATION.--Lat 31°31'46", long 83°49'16", Hydrologic Unit 03110204, near water tank, behind VFW on U.S. Highway 82 east, Sylvester, Ga.
Owner: City of Sylvester.
AQUIFER.--Floridan aquifer system.
WELL CHARACTERISTICS.--Drilled unused municipal well, diameter 18 in., depth 450 ft, cased to 212 ft, open hole.
DATUM.--Altitude of land-surface datum is 433 ft.
Measuring point: Floor of recorder shelter, 2.90 ft above land-surface datum.
REMARKS.--Well pumped and sounded July 19, 1978. Borehole geophysical survey conducted June 5, 1975. Water levels for period of missing recorder record, July 5 to September 5, were estimated.
PERIOD OF RECORD.--May 1972 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 191.50 ft below land-surface datum, May 17, 1973; lowest, 201.59 ft below land-surface datum, July 31, 1981.

Water level, in feet below land surface, through calendar year 1984 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	199.37	198.62	198.13	197.55	197.46	197.47	200.06	199.09	198.62	198.79	199.13	199.46
2	199.29	198.63	198.08	197.61	197.33	197.46	200.17	199.12	198.64	198.89	199.01	199.49
3	199.17	198.59	198.03	197.42	197.08	197.40	200.16	199.13	198.61	198.87	198.88	199.51
4	199.05	198.16	198.06	197.17	197.09	198.02	200.10	199.02	198.67	198.85	198.83	199.60
5	198.85	198.20	197.84	197.22	197.25	198.86	200.05	198.93	198.64	198.89	198.87	199.41
6	198.77	198.44	197.59	197.30	197.32	198.96	200.08	198.91	198.69	198.95	199.63	199.47
7	198.85	199.65	197.87	197.40	197.39	199.03	200.19	198.92	198.74	198.99	199.75	199.68
8	199.02	198.75	198.02	197.39	197.34	199.08	200.23	198.94	198.73	198.92	199.78	199.61
9	199.00	198.68	198.02	197.18	197.37	199.11	200.32	199.01	198.57	198.89	199.66	199.54
10	198.62	198.60	198.01	197.20	197.39	199.16	200.41	199.07	198.45	198.92	199.46	199.44
11	198.72	198.52	197.94	197.27	197.41	199.20	200.55	198.96	198.47	198.96	199.45	199.38
12	198.96	198.40	197.89	197.25	197.43	199.26	200.40	198.79	198.50	198.98	199.56	199.35
13	199.02	198.22	197.79	197.19	197.42	199.33	200.38	198.78	198.52	198.88	199.69	199.42
14	199.00	198.21	197.90	197.14	197.38	199.33	200.25	198.82	198.49	198.78	199.74	199.58
15	198.92	198.31	197.96	197.09	197.38	199.41	199.99	198.88	198.45	198.80	199.69	199.64
16	198.77	198.30	197.88	197.06	197.43	199.58	199.88	198.89	198.55	198.91	199.60	199.60
17	198.78	198.28	197.79	197.10	197.53	199.73	199.80	198.88	198.68	199.00	199.59	199.57
18	198.66	198.25	197.72	197.22	197.58	199.80	199.72	198.85	198.66	199.01	199.42	199.56
19	198.75	198.19	197.64	197.32	197.51	199.91	199.69	198.71	198.58	199.02	199.33	199.52
20	198.89	198.11	197.42	197.33	197.44	200.00	199.55	198.71	198.51	199.04	199.56	199.49
21	198.97	198.04	197.45	197.32	197.47	200.09	199.43	198.79	198.52	199.06	199.71	199.45
22	199.06	197.99	197.60	197.22	197.54	200.09	199.26	198.79	198.66	199.07	199.69	199.45
23	198.92	197.95	197.66	197.00	197.57	200.05	199.36	198.67	198.76	199.07	199.55	199.52
24	198.58	197.99	197.59	197.14	197.53	200.04	199.40	198.64	198.74	199.10	199.50	199.50
25	198.56	198.03	197.41	197.27	197.57	199.97	199.43	198.65	198.69	199.17	199.50	199.60
26	198.57	198.02	197.44	197.29	197.60	199.94	199.46	198.61	198.67	199.15	199.54	199.74
27	198.37	197.63	197.28	197.30	197.58	199.95	199.49	198.59	198.57	199.08	199.50	199.79
28	198.40	197.76	196.89	197.37	197.57	200.01	199.43	198.64	198.61	199.10	199.43	199.29
29	198.41	198.01	197.05	197.42	197.49	199.98	199.22	198.67	198.63	199.09	199.43	198.97
30	198.43	---	197.40	197.46	197.45	199.94	199.14	198.67	198.67	199.08	199.40	198.95
31	198.56	---	197.52	---	197.47	---	199.07	198.69	---	199.11	---	198.88
MEAN	198.82	198.25	197.71	197.27	197.43	199.34	199.83	198.83	198.62	198.98	199.46	199.47

CAL YR 1984 MEAN 198.67 HIGH 196.89 LOW 200.55

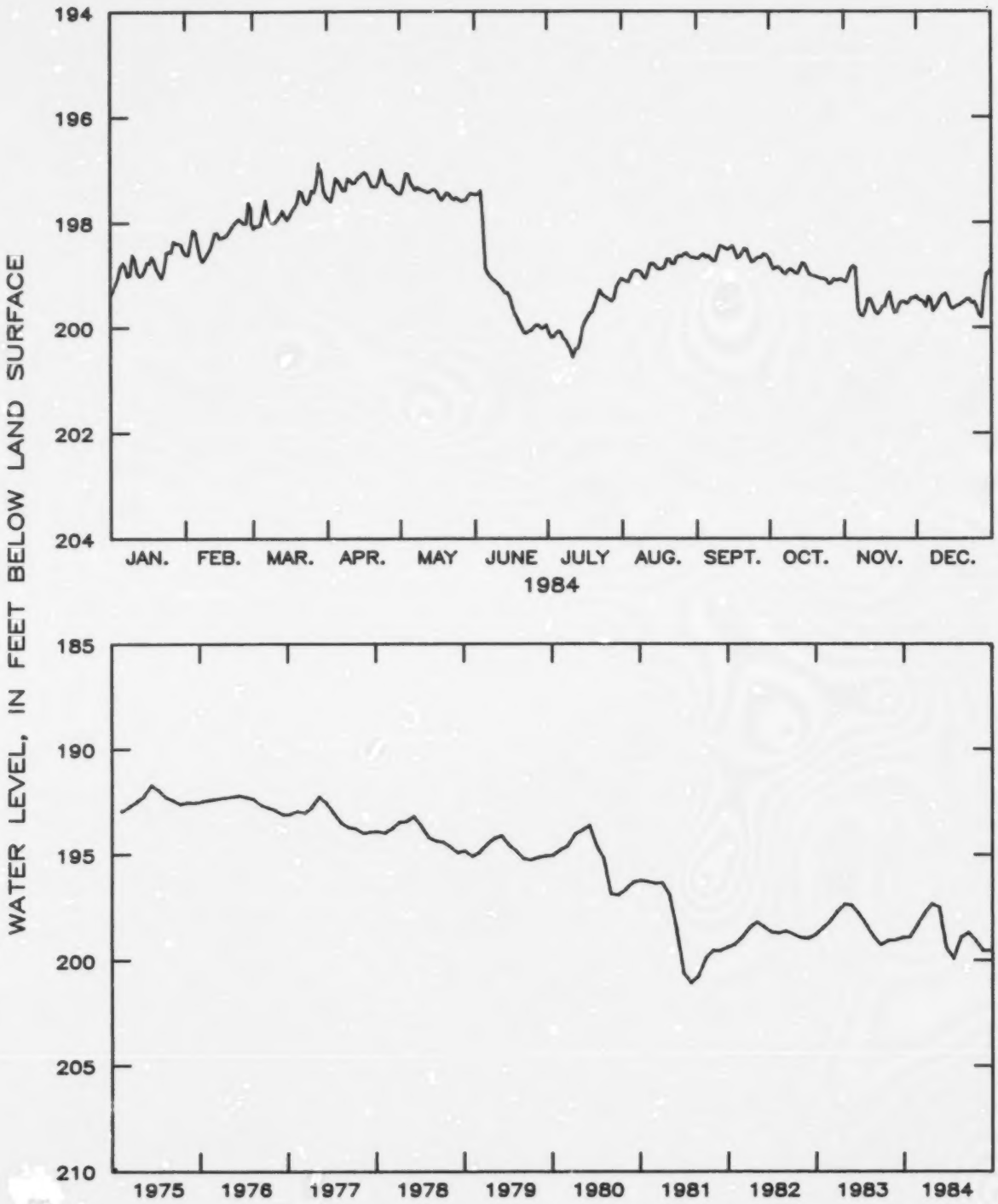

Figure 2.7.2–2.––Water level in observation well 15L020, Worth County.

17K001 SCL RAILROAD TIFT COUNTY

312716083304801 Local number, 17K001.
LOCATION.--Lat 31°27'16", long 83°30'48", Hydrologic Unit 03110204, along the Atlantic Coast Line Railroad, approximately 50 yards north of intersection of Seaboard Coast Line and the Southern Railroads.
Owner: Seaboard Coast Line Railroad.
AQUIFER.--Floridan aquifer system.
WELL CHARACTERISTICS.--Drilled unused municipal well, diameter 12 in., depth 312 ft, cased to 110 ft, open hole.
DATUM.--Altitude of land-surface datum is 345 ft.
Measuring point: Floor of recorder shelter, 2.70 ft above land-surface datum.
REMARKS.--Well sounded April 15, 1977; obstruction at 120 ft. Water levels for periods of missing recorder record, January 1-4 and January 7 to February 16, were estimated.
PERIOD OF RECORD.--February 1964 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 120.02 ft below land-surface datum, April 5, 1966; lowest, 141.86 ft below land-surface datum, July 30, 1981.

Water level, in feet below land surface, through calendar year 1984 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	137.27	136.49	136.00	135.49	135.37	135.42	137.21	136.32	136.25	137.14	137.67	137.24
2	137.23	136.38	135.96	135.48	135.35	135.41	137.19	136.36	136.21	137.29	137.54	137.19
3	137.18	136.27	135.94	135.33	135.19	135.32	137.15	136.38	136.19	137.31	137.38	137.23
4	137.14	136.01	135.83	135.15	135.12	135.60	137.04	136.28	136.26	137.43	137.21	137.32
5	137.10	135.92	135.53	135.12	135.29	135.97	137.00	136.20	136.24	137.52	137.22	137.19
6	137.08	136.11	135.34	135.18	135.25	136.25	137.04	136.20	136.30	137.67	137.38	137.26
7	136.98	136.36	135.66	135.29	135.28	136.43	137.16	136.22	136.35	137.71	137.50	137.50
8	137.02	136.51	135.81	135.13	135.32	136.56	137.21	136.25	136.35	137.56	137.57	137.40
9	137.14	136.45	135.86	134.94	135.21	136.58	137.31	136.33	136.14	137.53	137.50	137.25
10	136.89	136.40	135.82	135.00	135.23	136.56	137.41	136.40	136.05	137.77	137.31	137.14
11	136.93	136.23	135.62	135.06	135.36	136.75	137.56	136.30	136.21	137.99	137.22	137.07
12	137.12	136.06	135.68	135.07	135.52	137.08	137.42	136.14	136.38	138.01	137.32	137.06
13	137.17	135.85	135.70	135.08	135.50	137.35	137.41	136.14	136.52	137.89	137.45	137.13
14	137.02	135.92	135.82	135.09	135.56	137.35	137.29	136.19	136.57	137.78	137.53	137.31
15	136.91	135.91	135.89	134.95	135.54	137.41	137.05	136.26	136.58	137.80	137.55	137.35
16	136.80	135.94	135.91	134.91	135.62	137.48	136.95	136.28	136.65	137.87	137.48	137.24
17	136.83	136.11	135.76	135.00	135.81	137.56	136.88	136.23	136.71	137.86	137.47	137.28
18	136.72	136.11	135.63	135.11	135.96	137.64	136.81	136.26	136.67	137.88	137.29	137.29
19	136.83	135.98	135.60	135.34	135.86	138.32	136.79	136.13	136.79	137.97	137.24	137.27
20	136.97	135.94	135.42	135.27	135.81	138.74	136.66	136.14	136.84	137.96	137.43	137.26
21	137.01	135.92	135.27	135.19	135.97	138.86	136.55	136.23	137.03	137.89	137.55	137.25
22	137.11	135.87	135.47	135.04	136.1[illegible]	138.31	136.41	136.24	137.14	137.93	137.47	137.18
23	136.96	135.83	135.64	134.76	135.93	138.01	136.50	136.13	137.05	138.00	137.30	137.14
24	136.73	135.92	135.58	134.84	135.77	137.82	136.55	136.11	137.12	138.15	137.23	137.11
25	136.56	135.95	135.32	134.98	135.71	137.75	136.59	136.13	137.23	138.23	137.18	137.17
26	136.61	135.83	135.35	135.07	135.64	137.90	136.63	136.10	137.41	138.23	137.29	137.30
27	136.35	135.51	135.25	135.23	135.51	138.03	136.67	136.10	137.50	138.15	137.31	137.40
28	136.72	135.65	134.90	135.25	135.54	137.90	136.62	136.16	137.34	137.97	137.25	137.40
29	136.26	135.87	135.11	135.14	135.46	137.60	136.42	136.20	137.14	137.85	137.26	137.37
30	136.32	---	135.34	135.12	135.41	137.37	136.35	136.21	137.03	137.76	137.25	137.27
31	136.53	---	135.51	---	135.35	---	136.29	136.24	---	137.73	---	137.20
MEAN	136.87	136.04	135.60	135.12	135.53	137.18	136.91	136.22	136.68	137.80	137.38	137.25

CAL YR 1984 MEAN 136.55 HIGH 134.76 LOW 138.86

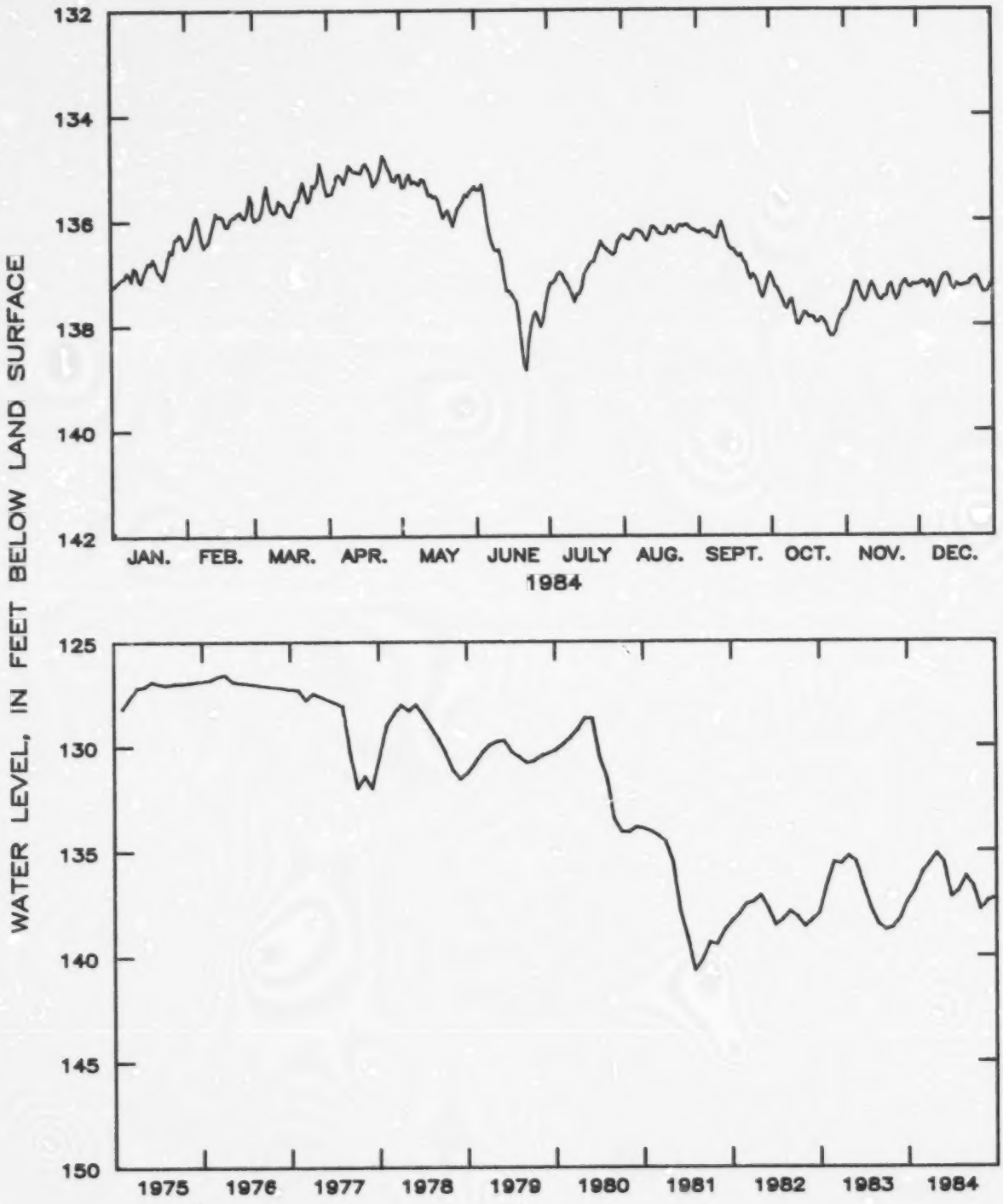

Figure 2.7.2–3.––Water level in observation well 17K001, Tift County.

18H016 ADEL COOK COUNTY

310813083260301 Local number, 18H016.
LOCATION.--Lat 31°08'13", long 83°26'03", Hydrologic Unit 03110203, on West Second Street near intersection of Georgia Highways 76 and 37.
Owner: U.S. Geological Survey, Adel test well.
AQUIFER.--Floridan aquifer system.
WELL CHARACTERISTICS.--Drilled observation well, diameter 8 in., depth 865 ft, cased to 207 ft, open hole.
DATUM.--Altitude of land-surface datum is 241 ft.
Measuring point: Floor of recorder shelter, 2.66 ft above land-surface datum.
REMARKS.--Well pumped July 19, 1978; water-quality sample collected at conclusion of pumping. Borehole geophysical survey conducted October 24, 1974. Water levels for periods of missing recorder record, February 16, June 5 to July 3, and October to November 5, were estimated.
PERIOD OF RECORD.--December 1964 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 163.34 ft below land-surface datum, July 5, 1966; lowest, 173.87 ft below land-surface datum, June 30, 1981.

Water level, in feet below land surface, through calendar year 1984 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	171.71	170.60	170.46	169.76	169.60	171.51	172.44	172.13	172.03	172.53	173.26	172.43
2	171.49	170.41	170.41	169.67	169.63	171.53	172.41	172.14	172.06	172.67	173.06	172.19
3	171.28	170.57	170.43	169.82	170.01	171.51	172.35	172.13	171.90	172.70	172.90	172.20
4	171.24	170.32	170.24	169.67	170.38	171.73	172.22	172.09	171.99	172.74	172.73	172.62
5	170.98	170.20	170.22	169.64	171.13	172.06	172.25	171.95	172.03	172.82	172.76	172.45
6	170.90	170.67	169.91	169.60	171.19	172.20	172.26	171.99	172.09	172.90	172.77	172.69
7	170.93	170.95	170.07	169.65	171.25	172.41	172.21	171.99	172.20	172.83	172.85	172.83
8	170.97	171.04	170.29	169.69	171.34	172.43	172.11	172.00	172.34	172.78	172.89	172.78
9	170.99	171.00	170.31	169.29	171.27	172.39	172.29	172.03	171.95	172.79	172.83	172.62
10	170.88	170.86	170.36	169.30	171.22	172.34	172.42	172.06	171.98	173.02	172.70	172.49
11	170.80	170.73	170.17	169.41	171.27	172.39	172.43	172.05	172.18	173.31	172.47	172.53
12	171.13	170.46	170.18	169.49	171.35	172.75	172.30	171.85	172.30	173.40	172.57	172.49
13	171.20	170.31	170.14	169.51	171.47	172.95	172.33	171.93	172.43	173.22	172.83	172.54
14	171.19	170.37	170.23	169.46	171.34	172.94	172.40	171.96	172.47	173.16	172.92	172.71
15	170.94	170.47	170.37	169.38	171.56	172.97	172.23	172.02	172.43	173.19	172.90	172.70
16	170.85	170.47	170.33	169.28	171.68	173.25	172.26	172.05	172.42	173.22	172.81	172.52
17	170.96	170.46	170.19	169.32	171.89	173.41	172.25	172.01	172.57	173.31	172.81	172.54
18	170.83	170.39	170.10	169.39	172.06	173.52	172.23	171.89	172.56	173.21	172.69	172.67
19	170.94	170.23	169.98	169.47	172.09	173.36	172.35	171.69	172.51	173.39	172.56	172.64
20	171.19	170.16	170.01	169.59	172.10	173.29	172.29	171.82	172.47	173.34	172.75	172.61
21	171.25	170.20	169.77	169.54	171.98	173.49	172.13	171.97	172.51	173.27	172.92	172.53
22	171.21	170.17	169.61	169.41	172.11	173.35	171.99	172.00	172.71	173.31	172.76	172.23
23	171.13	170.13	169.95	169.26	172.05	173.26	172.15	171.91	172.75	173.36	172.56	172.22
24	170.84	170.18	169.99	169.11	171.75	173.21	172.23	171.88	172.82	173.56	172.39	172.18
25	170.74	170.27	169.95	169.27	171.75	173.10	172.28	171.95	172.81	173.67	172.33	172.24
26	170.71	170.39	169.59	169.38	171.78	173.24	172.28	171.98	172.94	173.70	172.54	172.60
27	170.48	169.74	169.69	169.41	171.60	173.34	172.23	171.94	172.85	173.58	172.62	172.81
28	170.47	169.96	169.53	169.45	171.46	173.20	172.23	171.97	172.56	173.42	172.54	172.68
29	170.54	170.33	169.15	169.58	171.41	172.87	172.03	171.98	172.46	173.37	172.52	172.50
30	170.43	---	169.34	169.61	171.43	172.63	172.05	172.01	172.39	173.22	172.37	172.31
31	170.71	---	169.73	---	171.43	---	172.05	172.02	---	173.30	---	172.26
MEAN	170.95	170.42	170.02	169.46	171.42	172.75	172.25	171.93	172.33	173.17	172.72	172.51

CAL YR 1984 MEAN 171.07 HIGH 169.11 LOW 173.70

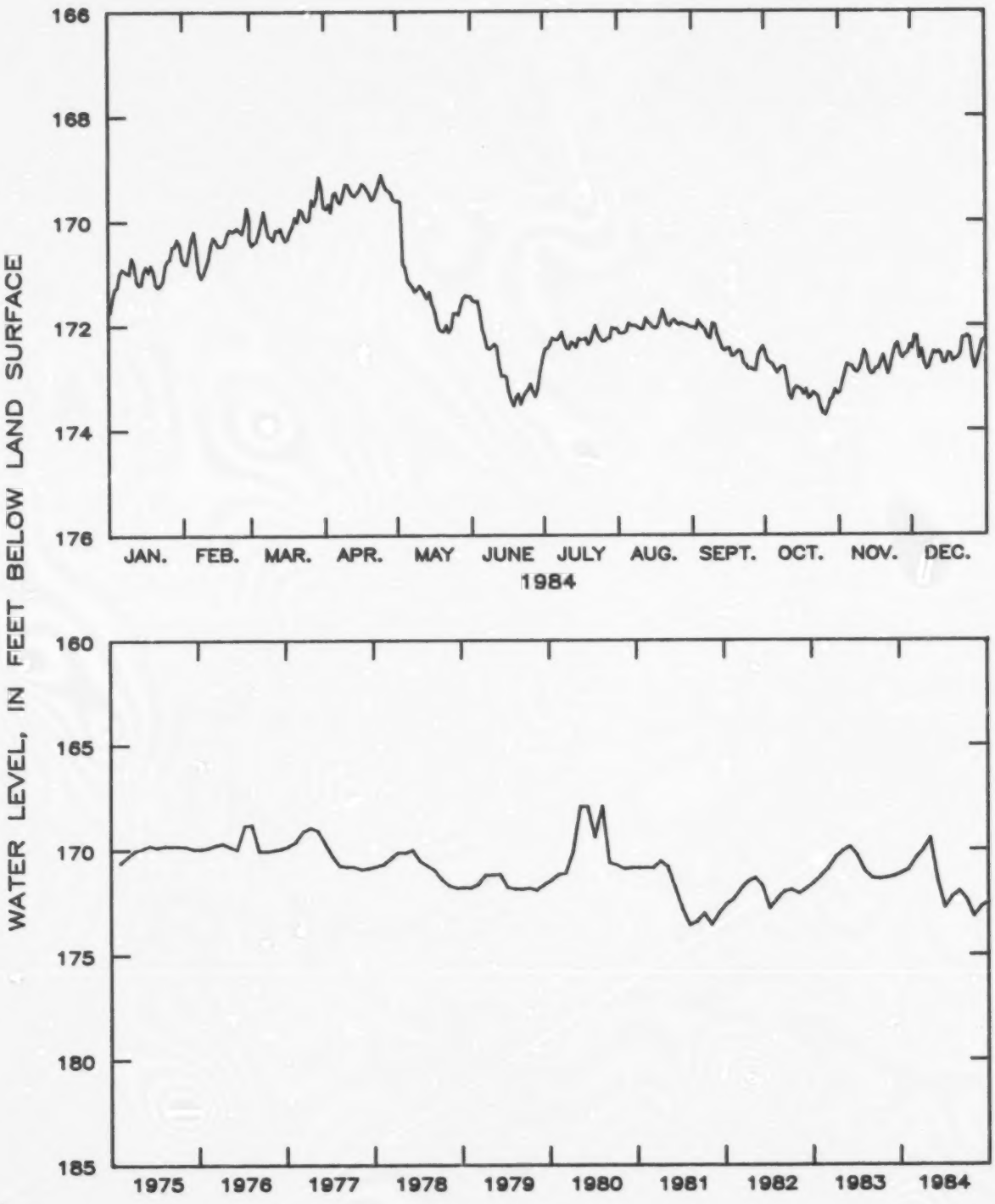

Figure 2.7.2–4.––Water level in observation well 18H016, Cook County.

19F039 VALDOSTA 8 LOWNDES COUNTY

305241083154401 Local number, 19F039.
LOCATION.--Lat 30°52'41", long 83°15'44", Hydrologic Unit 03110203, at water tank by Valdosta High School.
Owner: City of Valdosta, well 8.
AQUIFER.--Floridan aquifer system.
WELL CHARACTERISTICS.--Drilled unused observation well, depth 450 ft, cased to 350 ft, open hole.
DATUM.--Altitude of land-surface datum is 222 ft.
Measuring point: Pump base, 1.40 ft above land-surface datum.
REMARKS.--Water levels for periods of missing recorder record, January 6 to February 29, March 5 to April 1, and April 25 to May 3, were estimated.
PERIOD OF RECORD.--February 1979 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 114.28 ft below land-surface datum, April 9, 1984; lowest, 145.67 ft below land-surface datum, October 24, 1981.

Water level, in feet below land surface, through calendar year 1984 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	122.72	118.41	117.76	115.21	116.13	121.02	124.34	121.75	123.26	135.14	137.43	132.15
2	122.17	118.35	117.58	115.20	116.42	121.27	124.12	121.14	123.48	135.45	137.34	132.00
3	121.76	118.15	117.32	114.98	116.49	121.32	123.58	120.80	123.67	135.65	136.80	132.00
4	121.44	117.92	117.12	114.66	117.55	121.28	123.16	120.68	123.80	135.80	135.18	132.52
5	120.98	117.87	116.94	114.60	118.04	121.50	122.92	120.74	123.93	135.97	133.93	132.65
6	120.96	118.05	116.35	114.63	118.40	121.78	122.76	120.91	124.05	136.26	133.76	132.80
7	121.01	118.29	115.80	114.63	118.70	122.12	122.63	121.25	124.32	136.54	133.56	133.00
8	121.12	118.25	115.48	114.53	119.02	122.50	122.68	121.58	124.87	136.74	133.95	132.87
9	121.21	118.10	115.17	114.28	119.28	122.84	123.00	121.90	125.55	136.95	134.36	132.48
10	121.13	118.03	114.99	114.34	119.54	123.08	123.38	122.25	126.04	137.14	134.75	132.22
11	121.45	118.01	115.02	114.46	119.63	123.38	123.56	122.54	126.40	137.42	135.13	132.15
12	121.69	117.98	115.19	114.60	119.68	124.30	123.68	122.76	126.73	137.72	135.48	132.19
13	121.74	117.90	115.37	114.74	119.83	125.64	123.94	122.92	127.20	137.86	135.78	132.32
14	121.76	117.98	115.52	114.87	119.97	126.35	123.98	123.06	127.38	138.00	135.85	132.38
15	121.70	118.16	115.74	115.00	120.16	126.78	123.73	123.27	129.10	138.16	135.70	132.36
16	121.65	118.24	115.79	115.22	120.48	127.24	123.50	123.37	129.04	138.34	135.65	132.37
17	121.71	118.32	115.83	115.56	120.87	127.12	123.46	123.35	129.70	138.58	135.82	132.52
18	121.83	118.37	116.01	116.05	121.16	127.10	123.47	123.13	130.25	138.13	135.87	132.72
19	121.76	118.36	116.23	116.50	121.32	127.73	123.47	122.97	130.84	137.75	134.60	132.90
20	121.81	118.36	116.39	116.89	121.43	128.53	123.45	123.12	131.46	138.40	132.90	133.15
21	121.88	118.49	116.40	117.19	121.62	129.25	123.43	123.20	132.12	138.75	133.33	133.35
22	121.82	118.57	116.32	117.35	121.83	128.33	123.34	123.30	132.75	139.00	132.92	133.53
23	121.68	118.62	116.87	117.54	121.82	127.83	123.33	123.26	133.22	139.23	131.82	133.63
24	121.54	118.50	116.55	117.76	121.73	127.14	123.30	123.12	133.64	139.40	131.62	133.54
25	120.99	118.82	116.51	117.93	121.80	125.62	123.26	123.00	134.10	139.60	132.27	133.62
26	120.64	118.91	116.68	117.91	121.78	124.92	123.26	122.88	134.46	139.70	132.75	133.68
27	120.14	118.86	116.40	117.76	121.70	124.74	123.25	122.74	134.84	139.67	133.16	133.78
28	119.68	117.87	115.84	116.57	121.52	124.72	123.20	122.78	134.94	139.30	133.04	133.87
29	119.20	117.89	115.04	116.16	121.16	124.53	123.14	122.90	134.75	137.35	132.33	133.78
30	118.71	---	115.38	116.12	120.92	124.32	122.90	123.02	134.84	136.36	132.07	133.83
31	118.51	---	115.27	---	120.90	---	122.42	123.12	---	137.06	---	133.98
MEAN	121.16	118.26	116.03	115.76	120.03	124.81	123.34	122.48	128.99	137.66	134.31	132.91

CAL YR 1984 MEAN 124.67 HIGH 114.28 LOW 139.70

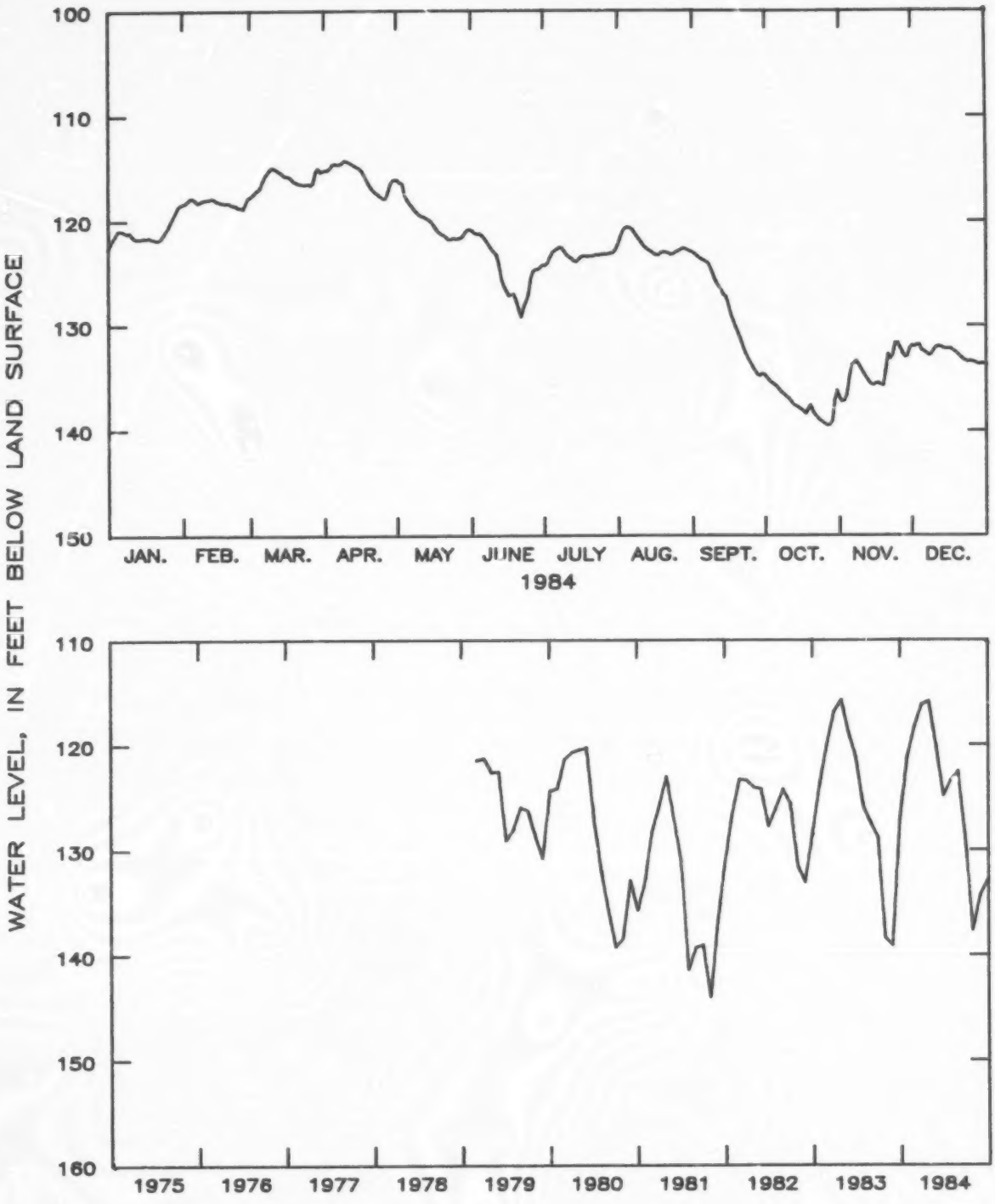

Figure 2.7.2–5.––Water level in observation well 19F039, Lowndes County.

19E009 VALDOSTA LOWNDES COUNTY

304949083165301 Local number, 19E009.
LOCATION.--Lat 30°49'51", long 83°16'59", Hydrologic Unit 03110202, N. Oak Street, one block north of intersection with U.S. Highway 84, Valdosta, Ga.
Owner: City of Valdosta.
AQUIFER.--Floridan aquifer system.
WELL CHARACTERISTICS.--Drilled unused municipal supply well, diameter 20 in., depth 342 ft, cased to 200 ft, open hole.
DATUM.--Altitude of land-surface datum is 217 ft.
Measuring point: Top of casing, 1.7 ft above land-surface datum.
REMARKS.--Well pumped July 18, 1978; water-quality sample collected at conclusion of pumping. Borehole geophysical survey conducted April 11, 1963. Water level affected by city pumping.
PERIOD OF RECORD.--February 1957 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 112.69 ft below land-surface datum, March 9, 1964; lowest, 145.50 ft below land-surface datum, October 22, 1981.

Water level, in feet below land surface, through calendar year 1984 daily mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	131.44	125.02	121.89	121.01	121.60	125.99	129.57	127.45	127.86	136.39	138.19	134.82
2	131.19	124.48	123.48	121.79	122.51	127.77	129.21	127.12	127.41	135.43	138.37	134.76
3	130.65	124.02	125.51	120.09	121.79	128.58	129.07	127.25	127.98	135.96	138.01	135.07
4	129.07	123.99	122.69	120.73	121.96	128.74	128.45	126.32	128.31	136.67	137.10	134.90
5	128.77	123.74	122.57	120.01	123.53	129.89	128.17	125.98	128.42	137.39	136.53	134.63
6	128.52	123.43	121.76	120.19	122.75	130.50	128.16	126.27	128.66	137.48	135.93	134.47
7	127.79	124.05	121.74	120.43	123.49	130.56	127.41	127.05	128.66	136.84	136.52	135.07
8	129.26	124.16	121.17	119.34	124.01	130.42	128.59	127.61	129.24	137.10	135.88	133.09
9	127.89	127.85	120.27	119.60	123.76	130.81	128.29	127.82	129.00	137.42	136.15	133.05
10	126.62	123.70	120.96	119.03	123.95	129.93	128.25	127.64	129.25	137.71	136.72	133.00
11	128.12	124.19	120.82	119.21	128.43	130.15	128.39	127.44	129.99	137.82	136.42	134.30
12	127.49	123.43	120.71	119.52	126.23	131.63	128.04	126.54	130.42	138.28	136.48	133.25
13	127.42	125.30	121.05	119.44	125.26	132.28	128.67	127.47	130.84	138.26	136.51	133.29
14	127.70	123.28	121.38	119.63	125.48	130.90	128.81	127.81	131.23	138.07	136.97	133.20
15	127.13	123.69	121.00	119.86	125.03	130.53	127.85	128.25	130.95	138.21	136.84	135.31
16	127.20	123.51	121.14	119.24	126.13	130.45	127.88	128.56	132.10	138.65	137.23	134.76
17	127.01	123.49	121.33	119.39	128.02	130.74	128.16	129.21	131.70	139.12	137.48	134.59
18	127.33	127.57	121.52	120.67	127.12	130.55	128.45	128.04	132.46	139.14	136.95	135.37
19	127.46	123.26	121.13	120.72	127.73	131.06	127.91	127.43	132.59	138.36	136.70	135.41
20	127.30	122.94	120.87	120.66	127.16	132.13	128.09	127.62	132.77	138.36	135.48	134.70
21	127.61	123.48	121.57	122.47	127.49	132.53	128.52	127.78	133.90	138.28	135.08	134.58
22	127.24	124.51	121.23	122.29	126.53	131.54	128.20	127.86	134.45	138.53	134.74	135.57
23	127.90	124.34	121.29	121.55	126.62	131.17	128.05	128.11	134.60	138.90	134.61	135.75
24	124.79	124.27	121.34	121.82	126.28	131.09	128.59	127.88	134.66	139.61	134.98	135.95
25	127.24	124.56	121.57	122.52	126.76	130.53	128.03	127.53	135.06	139.71	134.58	135.72
26	126.23	125.97	121.36	122.14	126.71	130.65	128.39	127.20	135.70	139.33	134.71	135.93
27	125.98	123.41	120.94	122.11	125.61	130.44	128.08	128.00	136.08	139.47	134.82	135.54
28	126.06	136.36	121.09	122.21	125.74	130.01	127.26	127.52	137.09	139.26	135.22	135.20
29	125.12	123.75	120.59	121.96	125.74	130.37	126.66	127.55	135.53	138.84	134.83	135.28
30	125.00	---	120.64	121.36	125.66	129.28	127.21	127.58	135.42	137.73	134.72	135.04
31	124.53	---	120.98	---	126.09	---	127.38	123.17	---	138.32	---	135.48
MEAN	127.54	123.82	121.51	120.70	125.36	130.37	128.19	127.56	131.74	138.09	136.16	134.75

CAL YR 1984 MEAN 128.43 HIGH 119.03 LOW 139.71

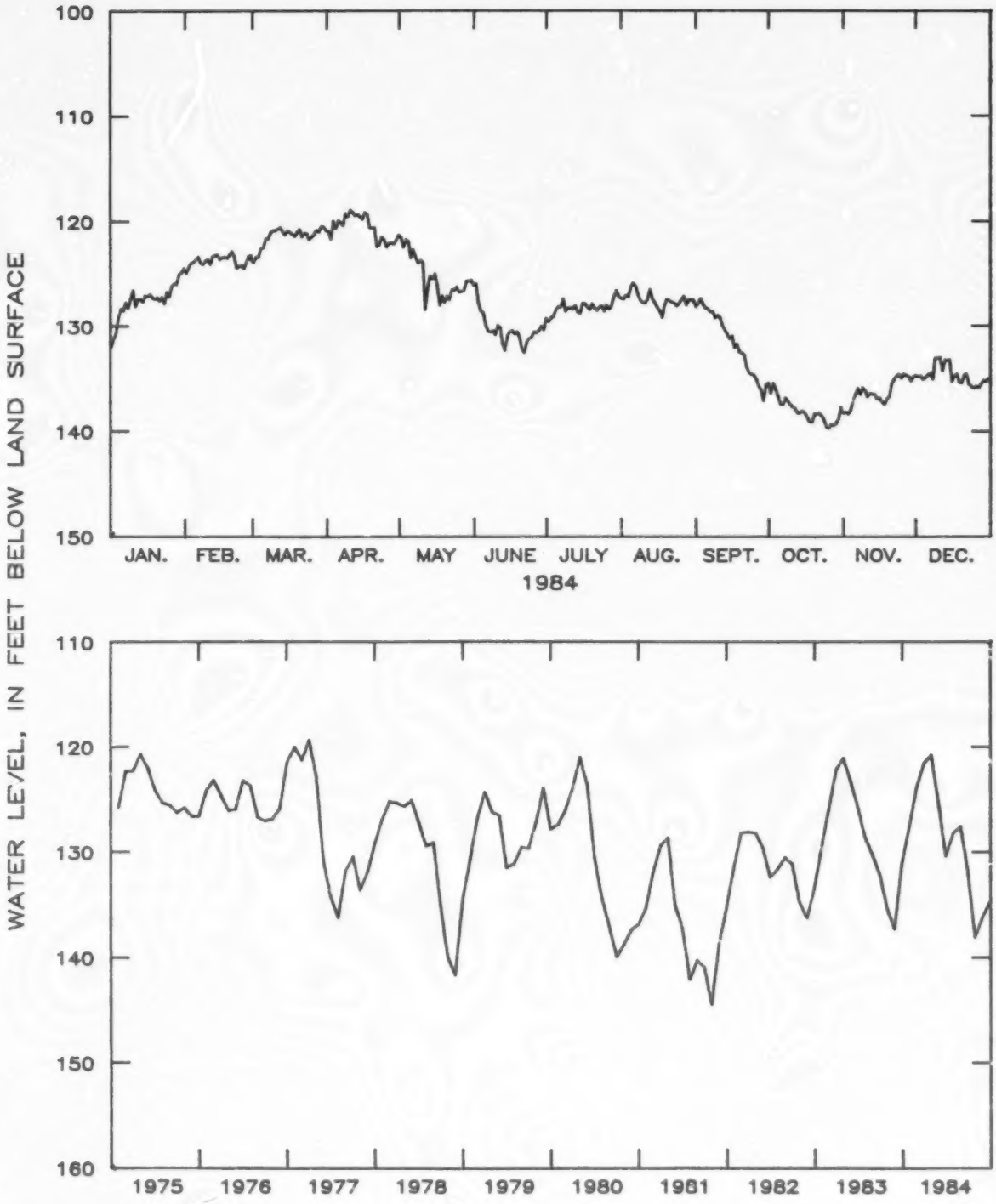

Figure 2.7.2–6.––Water level in observation well 19E009, Lowndes County.

2.7.3 East-central area

Water levels in the Floridan aquifer system in east-central Georgia are affected by precipitation, evapotranspiration, stream stage, and pumping. Precipitation was about normal during the summer of 1982, and ground-water levels began to recover from the record lows experienced during the 1980-81 drought. Mean annual water levels changed little in Laurens and Montgomery Counties, but showed a slight decline in Toombs County during 1982-84.

Mean annual water levels during 1984 ranged from 0.1 to 0.8 foot lower than in 1983.

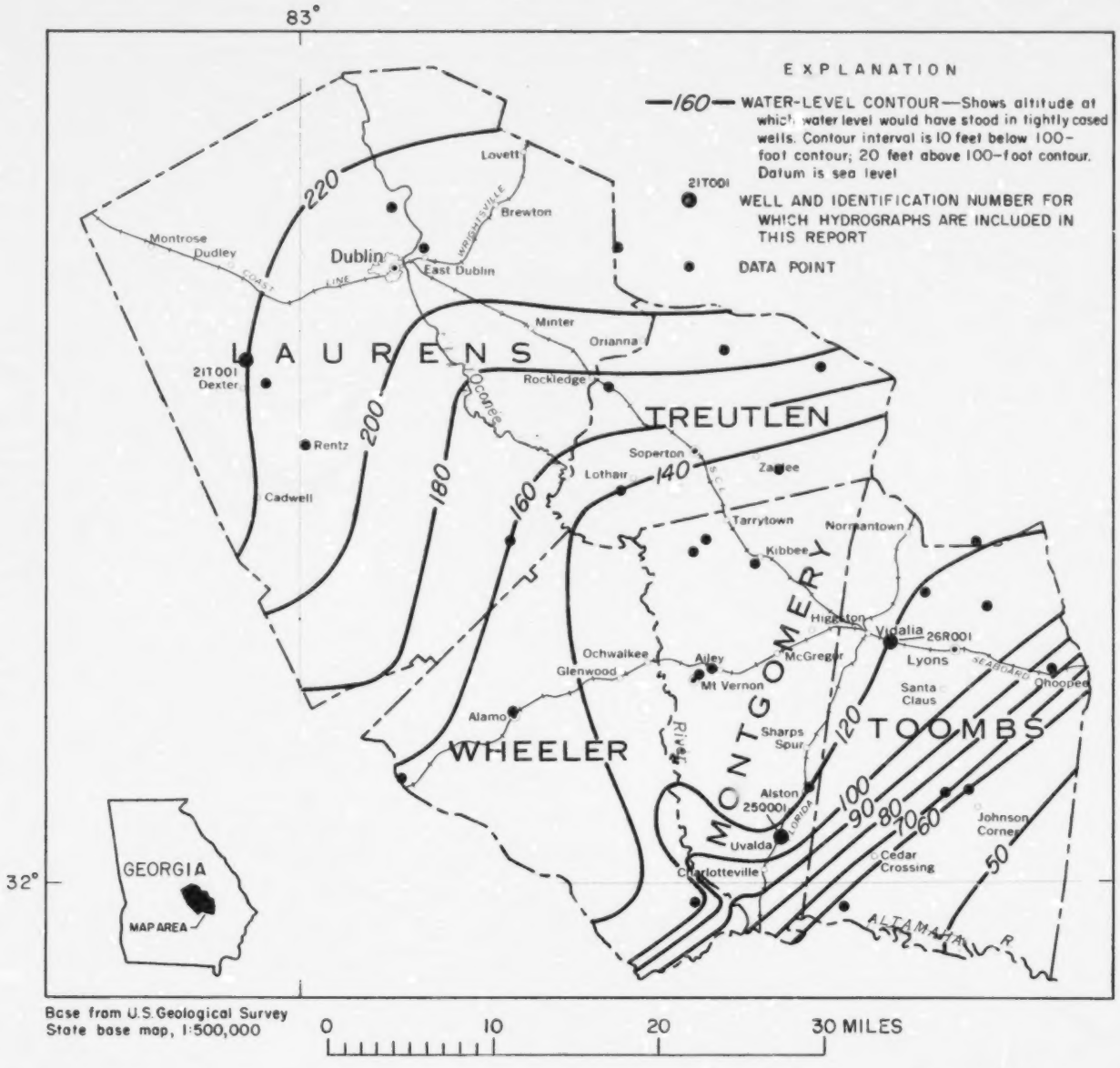

Figure 2.7.3.-1.—Observation well locations and the water level in the Floridan aquifer system in the east-central area, November 1982.

21T001 HOGAN LAURENS COUNTY

322652083033001 Local number, 21T001.
LOCATION.--Lat 32°27'06", long 83°03'28", Hydrologic Unit 03070102, approximately 1.8 mi northeast of Dexter, Ga.
Owner: Danny Hogan.
AQUIFER.--Floridan aquifer system.
WELL CHARACTERISTICS.--Drilled unused domestic well, diameter 4 in., depth 123 ft, cased to 89 ft, open hole.
DATUM.--Altitude of land-surface datum is 252 ft.
Measuring point: Floor of recorder shelter, 2.57 ft above land-surface datum.
REMARKS.--Borehole geophysical survey conducted November 1973. Water levels for period of missing recorder record, August 7-16, were estimated.
PERIOD OF RECORD.--March 1964 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 24.04 ft below land-surface datum, February 17-18, 1983; lowest, 39.58 ft below land-surface datum, November 12, 1968.

Water level, in feet below land surface, through calendar year 1984 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	25.45	24.74	25.52	25.79	26.49	27.26	30.59	23.77	28.71	32.80	34.92	35.84
2	25.45	24.78	25.41	25.88	26.57	27.19	30.84	28.05	28.90	32.91	34.93	35.90
3	25.44	24.79	25.35	25.89	26.59	27.16	30.82	27.29	29.06	32.98	34.94	35.92
4	25.45	24.74	25.31	25.85	26.62	26.75	30.83	26.76	29.24	33.07	34.96	35.96
5	25.45	24.78	25.24	25.78	26.77	27.26	30.96	26.43	29.44	33.16	34.99	35.88
6	25.46	24.92	25.04	25.78	26.92	27.37	31.12	26.22	29.62	33.27	35.13	35.80
7	25.57	25.07	24.92	25.77	27.07	27.50	31.16	26.24	29.80	33.36	35.18	35.86
8	25.71	25.20	24.84	25.77	27.18	27.64	31.21	26.25	29.97	33.40	35.24	35.85
9	25.83	25.26	24.79	25.73	27.32	27.78	31.29	26.27	30.10	33.46	35.26	35.84
10	25.82	25.32	24.80	25.69	27.46	27.94	31.36	26.30	30.20	33.54	35.26	35.83
11	25.84	25.39	24.80	25.70	27.60	28.11	31.43	26.28	30.36	33.64	35.24	35.82
12	26.02	25.46	24.82	25.71	27.73	28.31	31.52	26.26	30.53	33.71	35.31	35.82
13	26.14	25.49	24.83	25.71	27.84	28.52	31.67	26.24	30.70	33.75	35.40	35.83
14	26.22	25.50	24.89	25.74	27.95	28.67	31.79	26.22	30.85	33.78	35.45	35.91
15	26.28	25.60	24.96	25.79	28.08	28.85	31.90	26.20	30.98	33.86	35.48	35.93
16	26.31	25.67	24.99	25.87	28.24	29.04	31.93	26.23	31.17	33.96	35.48	35.93
17	26.38	25.77	25.07	25.97	28.42	29.25	31.98	26.19	31.34	34.05	35.50	35.95
18	26.43	25.85	25.12	26.11	28.57	29.41	32.05	26.26	31.45	34.11	35.51	35.98
19	26.40	25.92	25.18	26.24	28.66	29.53	32.12	26.35	31.53	34.15	35.51	36.00
20	26.35	25.99	25.22	26.26	28.75	29.77	32.15	26.49	31.62	34.22	35.58	36.00
21	26.26	26.06	25.22	26.28	28.89	29.93	32.17	26.68	31.74	34.29	35.69	36.03
22	26.22	26.14	25.33	26.30	28.98	29.99	32.21	26.84	31.90	34.35	35.71	36.04
23	26.14	26.14	25.43	26.22	28.77	30.06	32.29	26.94	32.06	34.42	35.71	36.09
24	25.90	26.21	25.50	26.19	28.54	30.13	32.38	27.09	32.15	34.50	35.71	36.10
25	25.56	26.28	25.47	26.19	28.38	30.16	32.44	27.29	32.22	34.56	35.73	36.12
26	25.28	26.37	25.49	26.19	28.29	30.14	32.49	27.52	32.33	34.61	35.77	36.15
27	25.00	26.20	25.49	26.22	28.23	30.31	32.49	27.73	32.46	34.65	35.79	36.19
28	24.82	25.78	25.38	26.27	28.15	30.51	32.28	27.93	32.56	34.70	35.76	36.19
29	24.72	25.58	25.43	26.33	27.91	30.41	31.34	28.13	32.62	34.74	35.77	36.19
30	24.68	---	25.62	26.39	27.61	30.58	30.33	28.33	32.71	34.78	35.79	36.19
31	24.70	---	25.72	---	27.39	---	29.44	28.52	---	34.87	---	36.19
MEAN	25.72	25.55	25.20	25.99	27.81	28.85	31.57	26.91	30.94	33.92	35.42	35.98

CAL YR 1984 MEAN 29.50 HIGH 24.68 LOW 36.19

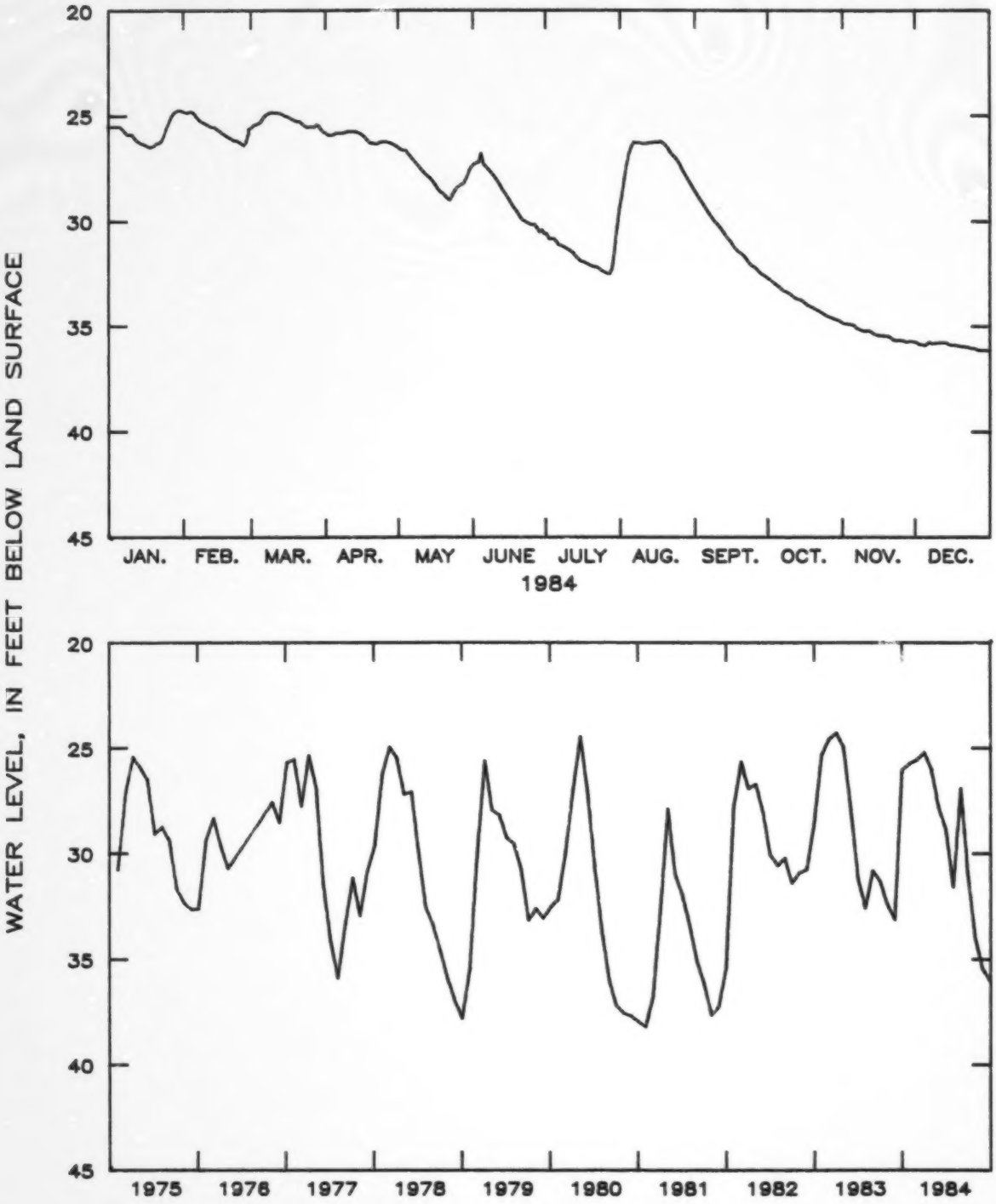

Figure 2.7.3–2.––Water level in observation well 21T001, Laurens County.

25Q001 UVALDA SCHOOL MONTGOMERY COUNTY

320226082301101 Local number, 25Q001.
LOCATION.--Lat 32°02'25", long 82°30'05", Hydrologic Unit 03070106, well is located behind the Uvalda School in the city of Uvalda.
Owner: Montgomery County Board of Education.
AQUIFER.--Floridan aquifer system.
WELL CHARACTERISTICS.--Drilled unused supply well, diameter 6 in., depth 536 ft., cased to 421 ft, open hole.
DATUM.--Altitude of land-surface datum is 190 ft.
Measuring point: Top of 6-in. casing at land surface.
REMARKS.--Borehole geophysical survey conducted April 22, 1966.
PERIOD OF RECORD.--June 1966 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 64.13 ft below land-surface datum, June 10, 1966; lowest, 78.9 ft below land-surface datum, October 9, 1981.

Water level, in feet below land surface, through calendar year 1984 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	76.69	76.22	75.89	75.52	75.25	75.10	75.67	76.50	76.35	76.55	76.89	76.66
2	76.67	76.23	75.85	75.52	75.15	75.09	75.77	76.49	76.41	76.60	76.92	76.69
3	76.65	76.23	75.85	75.43	74.98	75.09	75.91	76.46	76.37	76.57	76.75	76.69
4	76.58	75.95	75.84	75.28	74.90	75.06	75.81	76.44	76.35	76.55	76.71	76.75
5	76.47	75.96	75.79	75.30	75.09	75.12	75.82	76.44	76.39	76.57	76.68	76.65
6	76.40	76.06	75.82	75.38	75.18	75.20	75.86	76.43	76.44	76.62	76.77	76.61
7	76.46	76.18	75.80	75.44	75.22	75.24	75.87	76.39	76.47	76.63	76.85	76.74
8	76.54	76.25	75.70	75.45	75.14	75.27	75.91	76.38	76.46	76.62	76.86	76.69
9	76.52	76.23	75.73	75.32	75.12	75.28	75.97	76.41	76.38	76.61	76.79	76.66
10	76.40	76.21	75.76	75.26	75.15	75.29	76.01	76.41	76.34	76.63	76.69	76.61
11	76.36	76.19	75.72	75.27	75.16	75.30	76.00	76.41	76.35	76.65	76.64	76.58
12	76.54	76.15	75.77	75.28	75.18	75.31	76.04	76.45	76.40	76.66	76.73	76.57
13	76.52	76.05	75.69	75.23	75.16	75.33	76.12	76.47	76.45	76.60	76.82	76.60
14	76.48	76.00	75.76	75.18	75.13	75.32	76.22	76.49	76.45	76.57	76.87	76.69
15	76.44	76.07	75.78	75.14	75.15	75.35	76.27	76.49	76.47	76.59	76.86	76.69
16	76.47	76.05	75.72	75.15	75.19	75.39	76.27	76.48	76.58	76.68	76.80	76.66
17	76.38	76.06	75.67	75.19	75.25	75.41	76.28	76.48	76.69	76.73	76.81	76.65
18	76.32	76.03	75.64	75.26	75.27	75.41	76.33	76.34	76.67	76.72	76.73	76.63
19	76.37	75.96	75.59	75.30	75.25	75.41	76.44	76.32	76.61	76.72	76.66	76.59
20	76.48	75.94	75.44	75.30	75.23	75.43	76.49	76.33	76.56	76.73	76.80	76.58
21	76.48	75.91	75.41	75.29	75.25	75.42	76.46	76.42	76.59	76.75	76.90	76.58
22	76.52	75.88	75.50	75.26	75.29	75.37	76.46	76.42	76.67	76.77	76.86	76.59
23	76.44	75.80	75.55	75.12	75.28	75.37	76.51	76.32	76.70	76.79	76.77	76.64
24	76.23	75.83	75.53	75.13	75.26	75.38	76.54	76.31	76.68	76.81	76.75	76.65
25	76.19	75.84	75.42	75.27	75.26	75.36	76.54	76.35	76.65	76.86	76.76	76.70
26	76.24	75.86	75.45	75.29	75.26	75.39	76.54	76.38	76.64	76.88	76.78	76.80
27	76.12	75.82	75.39	75.28	75.30	75.45	76.55	76.36	76.67	76.89	76.75	76.82
28	76.13	75.82	75.14	75.27	75.28	75.51	76.60	76.34	76.62	76.93	76.66	76.79
29	76.15	75.76	75.26	75.27	75.18	75.54	76.61	76.33	76.57	76.94	76.65	76.74
30	76.14	---	75.46	75.25	75.07	75.57	76.56	76.32	76.56	76.91	76.62	76.72
31	76.18	---	75.52	---	75.09	---	76.52	76.32	---	76.89	---	76.69
MEAN	76.40	76.00	75.61	75.29	75.18	75.33	76.22	76.40	76.52	76.71	76.77	76.67

CAL YR 1984 MEAN 76.09 HIGH 74.90 LOW 76.94

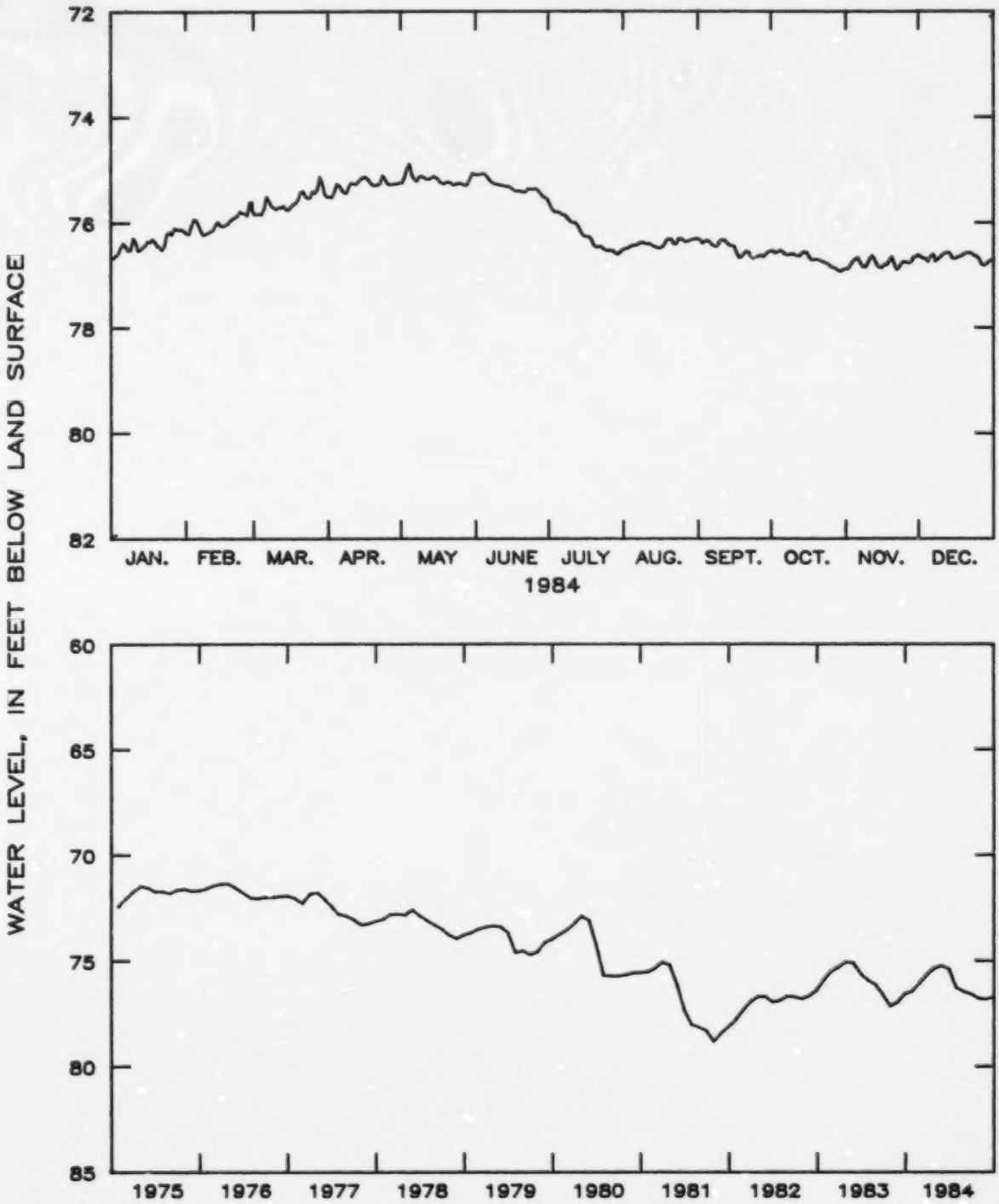

Figure 2.7.3–3.––Water level in observation well 25Q001, Montgomery County.

26R001 VIDALIA 2 TOOMBS COUNTY

321302082243601 Local number, 26R001.
LOCATION.--Lat 32°13'02", long 82°24'36", Hydrologic Unit 03070107, 15 ft south of the Vidalia Water and Street Department and Fire Station.
Owner: City of Vidalia, well 2.
AQUIFER.--Floridan aquifer system.
WELL CHARACTERISTICS.--Drilled municipal well, diameter 12 in., depth 1,000 ft, cased to 720 ft, open hole.
DATUM.--Altitude of land-surface datum is 285 ft.
Measuring point: Top of 12-in. casing.
REMARKS.--Water level affected by city pumping. Water levels for periods of missing recorder record, January 1, February 5-7, February 29 to March 27, July 31 to August 15, and August 17 to October 3, were estimated.
PERIOD OF RECORD.--April 1974 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 151.64 ft below land-surface datum, April 15, 1974; lowest, 164.70 ft below land-surface datum, August 25, 1983.

Water level, in feet below land surface, through calendar year 1984 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	161.94	160.92	160.50	159.64	160.04	160.50	162.10	161.82	163.30	163.10	163.01	161.98
2	162.23	160.85	160.50	159.83	159.71	160.55	162.00	161.93	163.35	163.14	162.82	161.72
3	162.20	160.74	160.37	159.75	159.95	160.48	162.15	162.02	163.30	163.09	162.67	161.82
4	162.13	160.56	160.28	159.65	159.58	160.87	162.10	162.13	163.26	163.25	162.00	161.90
5	161.41	160.74	160.18	159.72	159.85	161.40	162.15	162.25	163.29	163.08	162.04	161.80
6	161.10	160.93	160.00	159.79	159.86	161.67	162.30	162.36	163.33	163.09	162.47	161.72
7	161.34	161.11	160.11	159.85	159.86	161.87	162.35	162.45	163.34	162.72	162.66	161.95
8	161.72	161.29	160.29	159.66	159.94	161.97	162.40	162.56	163.32	162.75	162.71	161.73
9	161.81	160.98	160.35	159.63	159.92	162.10	162.40	162.72	163.23	162.94	162.77	161.60
10	161.81	160.95	160.28	159.56	160.01	162.00	162.68	162.84	163.17	163.01	162.70	161.58
11	161.90	160.88	160.21	159.64	160.07	162.15	162.95	162.96	163.17	163.19	162.35	161.70
12	162.00	160.51	160.33	160.07	160.45	162.40	162.77	163.13	163.21	163.13	162.36	161.77
13	162.25	160.39	160.22	159.82	160.01	162.40	162.70	163.27	163.24	163.19	162.54	161.80
14	161.92	160.52	160.31	160.01	160.21	162.00	162.65	163.41	163.23	162.97	162.64	161.72
15	161.60	160.68	160.53	159.62	160.66	162.20	162.29	163.54	163.24	163.05	162.66	161.76
16	161.56	160.60	160.42	159.56	160.61	162.25	162.25	163.65	163.33	163.26	162.54	161.58
17	161.61	160.65	160.20	159.60	160.69	162.55	162.50	163.59	163.42	163.17	162.52	161.62
18	161.51	160.64	160.27	159.69	160.79	162.35	162.39	163.48	163.40	163.02	162.19	161.86
19	161.68	160.26	160.04	159.84	160.78	162.10	162.18	163.45	163.32	163.03	162.11	161.91
20	161.97	160.37	159.86	160.14	160.92	161.90	161.97	163.45	163.26	163.09	162.34	161.85
21	161.96	160.53	159.90	160.22	161.04	161.85	161.76	163.52	163.27	162.87	162.41	161.88
22	161.94	160.49	159.94	160.20	161.07	162.70	161.87	163.51	163.34	162.88	162.23	161.75
23	161.43	160.45	160.11	159.62	160.60	162.50	162.02	163.40	163.36	163.00	161.89	161.49
24	161.00	160.49	160.06	159.75	160.73	162.30	162.19	163.37	163.32	163.15	161.94	161.47
25	161.11	160.45	159.83	159.79	161.00	162.35	162.29	163.40	163.28	163.31	161.81	161.29
26	160.93	160.18	159.83	160.06	161.05	162.35	162.43	163.42	163.26	163.31	162.00	161.53
27	160.95	159.97	159.76	160.26	160.59	162.40	162.38	163.39	163.27	163.26	162.22	161.62
28	160.82	160.13	159.39	159.94	160.40	162.60	162.22	163.35	163.21	162.75	162.11	161.72
29	160.48	160.37	159.69	159.81	160.47	162.65	162.03	163.32	163.15	162.79	162.15	161.65
30	160.75	---	159.89	159.96	160.50	162.55	161.63	163.30	163.12	162.97	162.05	161.45
31	160.88	---	159.87	---	160.30	---	161.71	163.29	---	162.97	---	161.61
MEAN	161.55	160.61	160.11	159.82	160.37	162.00	162.25	163.04	163.28	163.05	162.36	161.70

CAL YR 1984 MEAN 161.68 HIGH 159.39 LOW 163.65

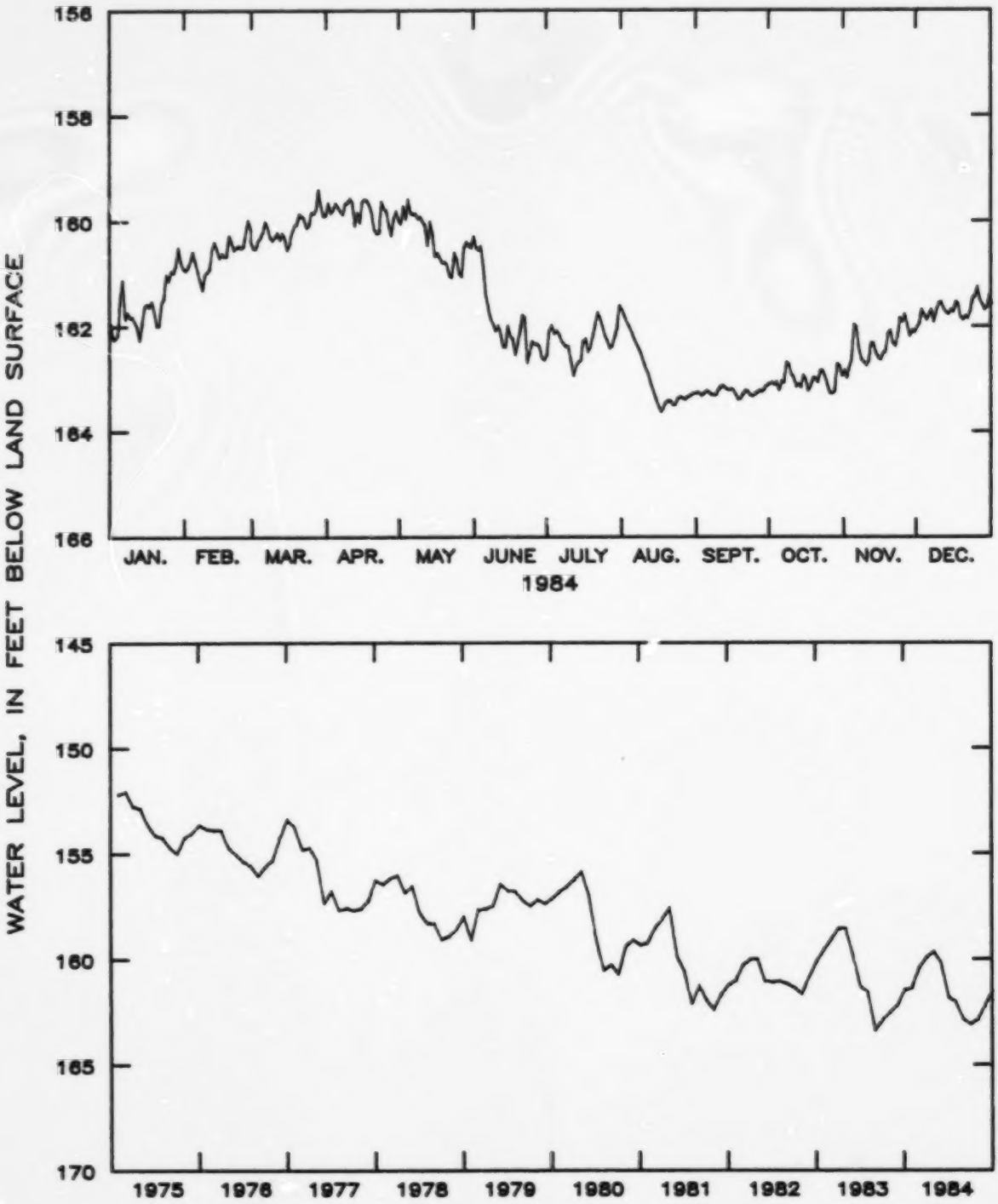

Figure 2.7.3–4.––Water level in observation well 26R001, Toombs County.

2.7.4 Coastal area

Ground water constitutes one of the most valuable natural resources in the 13-county coastal Georgia area. Growth of the pulp and paper industry, as well as the chemical industry, has occurred mainly because of the presence of large supplies of ground water available at moderate depths and at small cost. Data from the U.S. Geological Survey-Georgia Geologic Survey, Georgia Water-Use Data System indicate that the combined pumpage in the area is about 275 Mgal/d, about 80 percent of which is used for industrial purposes. All of the ground water is pumped from the Floridan aquifer system (Wait and Gregg, 1973, p. 9). Ground-water pumping from the Floridan aquifer system in the Savannah, Jesup, Riceboro, Brunswick, and St Marys-Fernandina Beach areas has resulted in water-level declines and the formation of cones of depression.

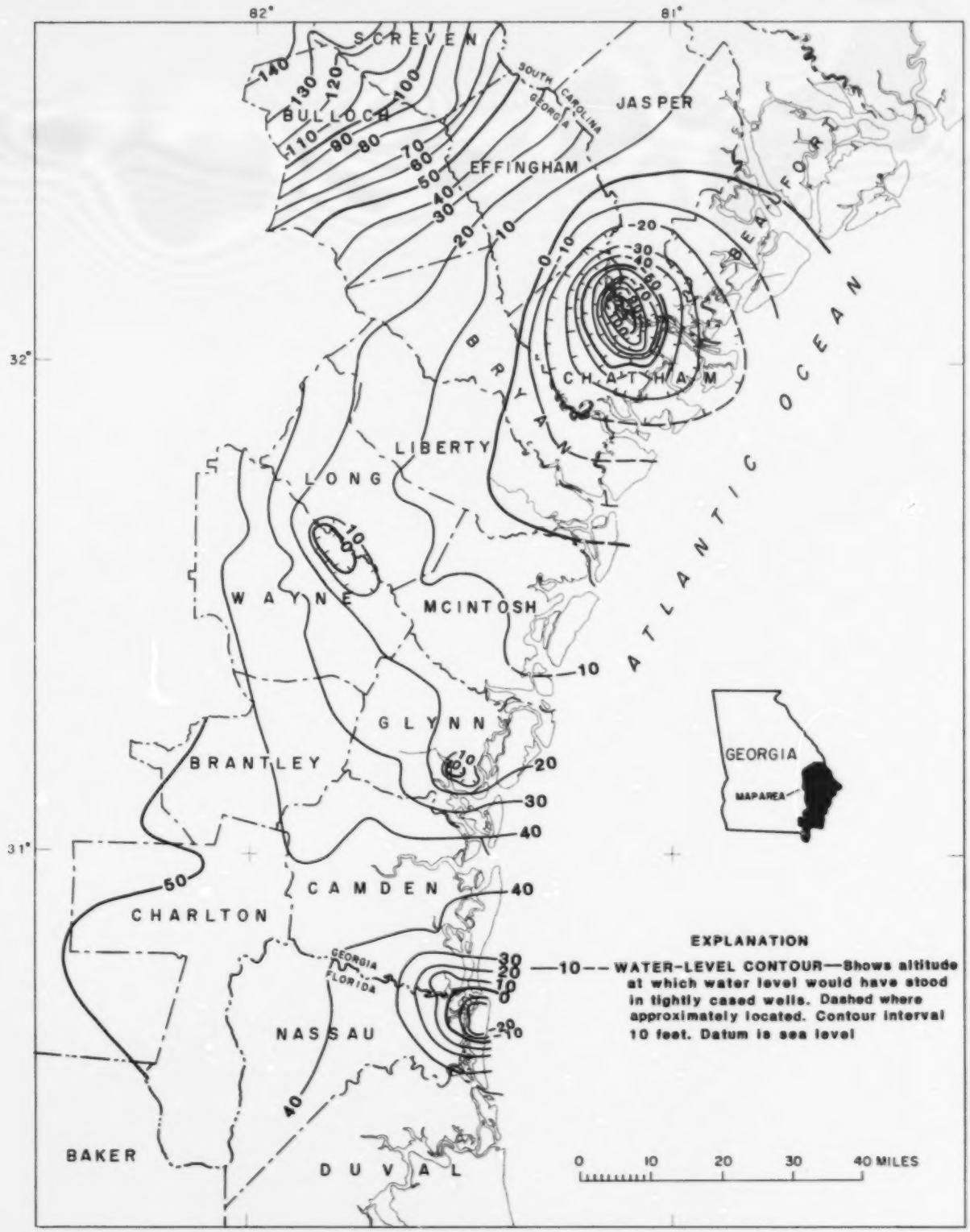

Figure 2.7.4-1.—Water level in the Floridan aquifer system in the coastal area, October-November 1984.

2.7.4.1 Savannah area

Ground-water levels in the Floridan aquifer system in the Savannah area are affected by ground-water pumpage of about 70 Mgal/d for municipal and industrial use. During 1981-83, water levels recovered somewhat from the record lows of 1980-81 due to increased precipitation and reductions in industrial pumping. Water levels showed a slight decline during 1983-84. The effects of partial industrial shutdowns during 1984 are illustrated by the hydrograph for observation well 36Q008 (Layne-Atlantic) near the center of pumping. Away from the pumping center, water levels at wells 36Q020, 38Q002, and 39Q003 show a subdued response to pumping.

Mean annual water levels in the Savannah area were from 1.3 to 7.3 feet lower in 1984 than in 1983.

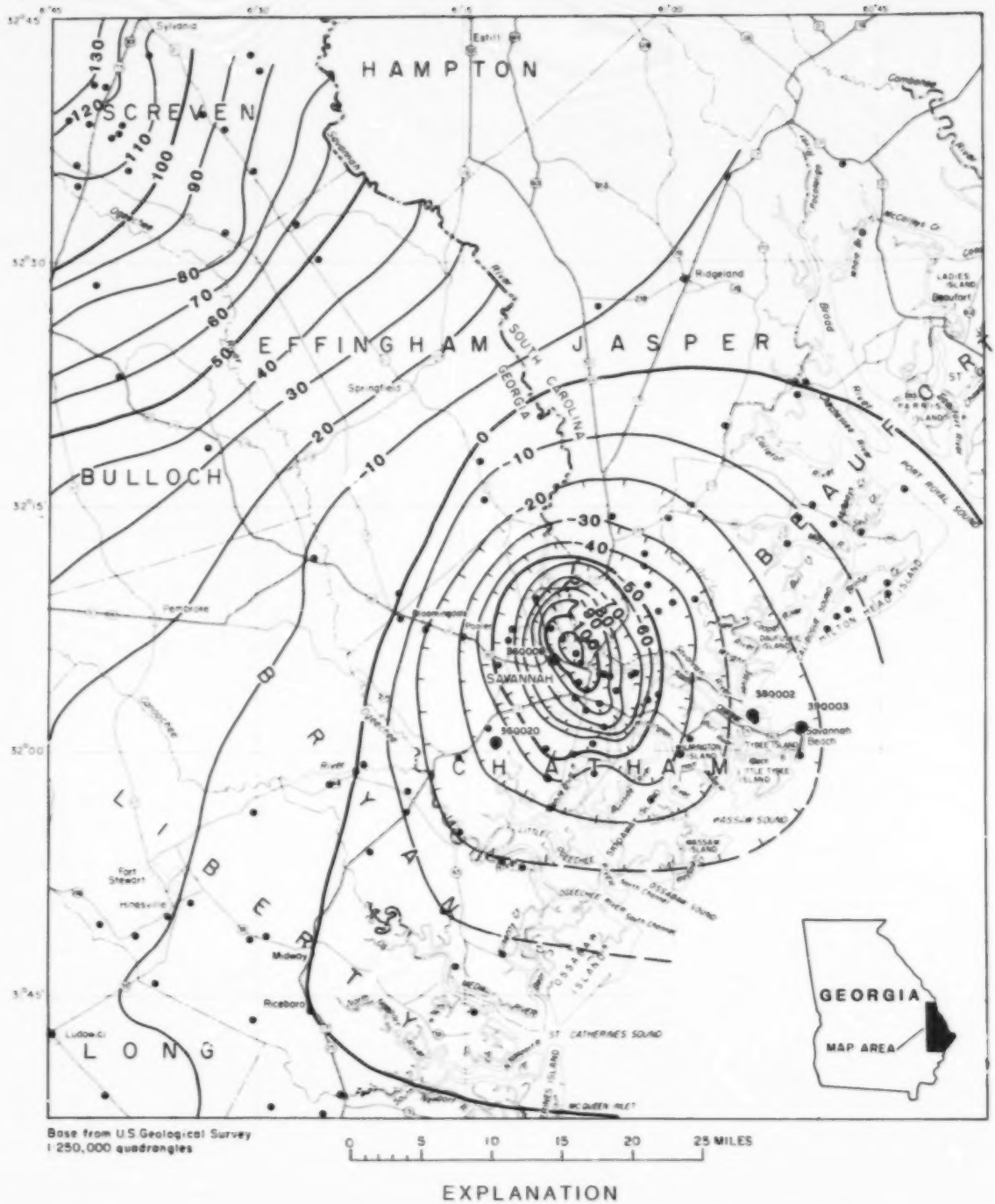

Figure 2.7.4.1-1.—Observation well locations and the water level in the Floridan aquifer system in the Savannah area, October-November 1984.

320530081085001 Local number, 36Q008.
LOCATION.--Lat 32°05'30", long 81°08'50", Hydrologic Unit 03060204, 0.19 mi southeast of intersection of Alfred Street and U.S. Highway 80.
Owner: Layne-Atlantic Co.
AQUIFER.--Floridan aquifer system.
WELL CHARACTERISTICS.--Drilled unused industrial well, diameter 4 in., depth 406 ft, cased to 250 ft, open hole.
DATUM.--Altitude of land-surface datum is 9.91 ft.
Measuring point: Top of 3-in. casing, 1.0 ft above land-surface datum.
REMARKS.--Water levels for periods of missing recorder record, March 12, April 24, June 21-24, July 2, and July 12-17, were estimated.
PERIOD OF RECORD.--February 1954 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 49.17 ft below land-surface datum, July 11, 1954; lowest, 124.40 ft below land-surface datum, August 30, 1980.

Water level, in feet below land surface, through calendar year 1984 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	109.42	111.34	111.57	107.89	105.64	110.15	115.00	113.26	113.23	113.48	113.70	111.08
2	109.54	111.51	110.94	107.64	105.92	109.30	114.58	113.39	112.41	113.90	114.20	110.78
3	109.36	111.33	109.93	108.34	105.40	109.06	114.16	112.64	111.54	113.70	113.46	110.93
4	110.39	111.76	108.96	107.37	105.61	108.91	113.72	111.46	111.56	113.82	111.99	111.36
5	110.58	111.34	108.46	107.68	105.72	109.24	115.19	110.92	111.94	114.35	111.56	111.28
6	110.94	111.98	108.26	107.94	105.66	110.98	114.78	110.90	112.49	114.49	112.33	110.98
7	111.56	113.12	109.03	106.73	105.48	111.29	114.20	112.14	112.74	113.91	112.86	111.57
8	111.43	113.54	108.50	105.21	105.82	111.56	113.78	113.42	112.32	113.32	112.96	111.36
9	111.44	113.39	108.13	105.10	106.56	112.13	113.74	114.22	111.35	114.02	112.79	111.17
10	111.03	113.10	106.62	106.92	108.16	112.78	114.92	115.06	110.68	114.42	111.70	111.98
11	110.81	113.55	104.80	107.30	109.70	113.13	115.64	114.76	111.64	114.06	111.11	112.85
12	111.16	112.86	105.55	107.28	110.20	113.48	115.88	114.28	115.20	114.01	111.94	113.35
13	110.90	112.08	107.07	106.59	110.39	113.96	116.11	113.84	113.33	113.26	111.80	113.66
14	109.98	111.89	107.69	105.47	110.39	113.92	116.35	114.37	112.79	111.81	111.88	113.60
15	108.69	112.15	107.40	104.80	110.48	114.32	116.59	115.02	112.80	111.37	112.10	112.56
16	107.86	112.14	106.10	105.18	110.44	113.31	116.92	115.52	112.06	112.54	111.84	111.46
17	108.68	112.00	105.38	106.60	109.47	114.42	117.06	115.24	112.12	113.42	111.73	111.90
18	109.15	111.82	105.68	106.30	110.02	113.91	117.30	114.88	112.80	113.78	111.12	113.06
19	109.85	111.22	106.97	105.60	109.88	112.48	116.35	114.32	113.24	114.10	111.39	113.08
20	110.73	110.76	108.58	103.98	109.44	110.90	115.86	113.70	113.69	113.38	112.80	113.66
21	111.80	110.80	108.87	102.74	109.90	111.37	115.58	113.34	114.22	112.00	112.96	113.74
22	112.42	110.92	109.68	102.24	110.31	111.85	114.63	113.75	113.92	112.08	111.98	112.45
23	112.10	110.70	110.16	101.14	110.54	112.32	114.44	114.04	113.38	113.21	110.63	107.45
24	112.10	111.36	109.70	100.69	110.40	112.80	114.95	113.74	113.17	113.56	109.94	101.11
25	111.79	111.36	108.74	101.20	110.80	113.27	115.24	114.04	113.56	114.14	109.61	97.10
26	111.80	110.96	108.92	102.86	110.81	114.06	114.76	113.44	114.14	114.39	110.55	96.52
27	110.48	110.40	109.43	103.54	110.46	113.68	114.42	113.30	114.20	113.45	111.50	97.12
28	110.04	110.84	109.56	104.03	110.58	113.74	114.90	113.52	114.78	112.41	111.66	95.30
29	110.07	111.96	109.53	104.18	110.48	113.60	113.80	113.88	114.26	112.77	111.62	94.40
30	111.42	---	110.54	104.82	110.36	114.94	113.20	113.68	113.44	113.46	111.32	91.99
31	111.24	---	109.92	---	110.50	---	113.33	113.49	---	113.36	---	90.34
MEAN	110.59	111.82	108.44	105.26	108.89	112.37	115.05	113.66	112.89	113.62	111.89	107.72

CAL YR 1984 MEAN 111.00 HIGH 90.34 LOW 117.30

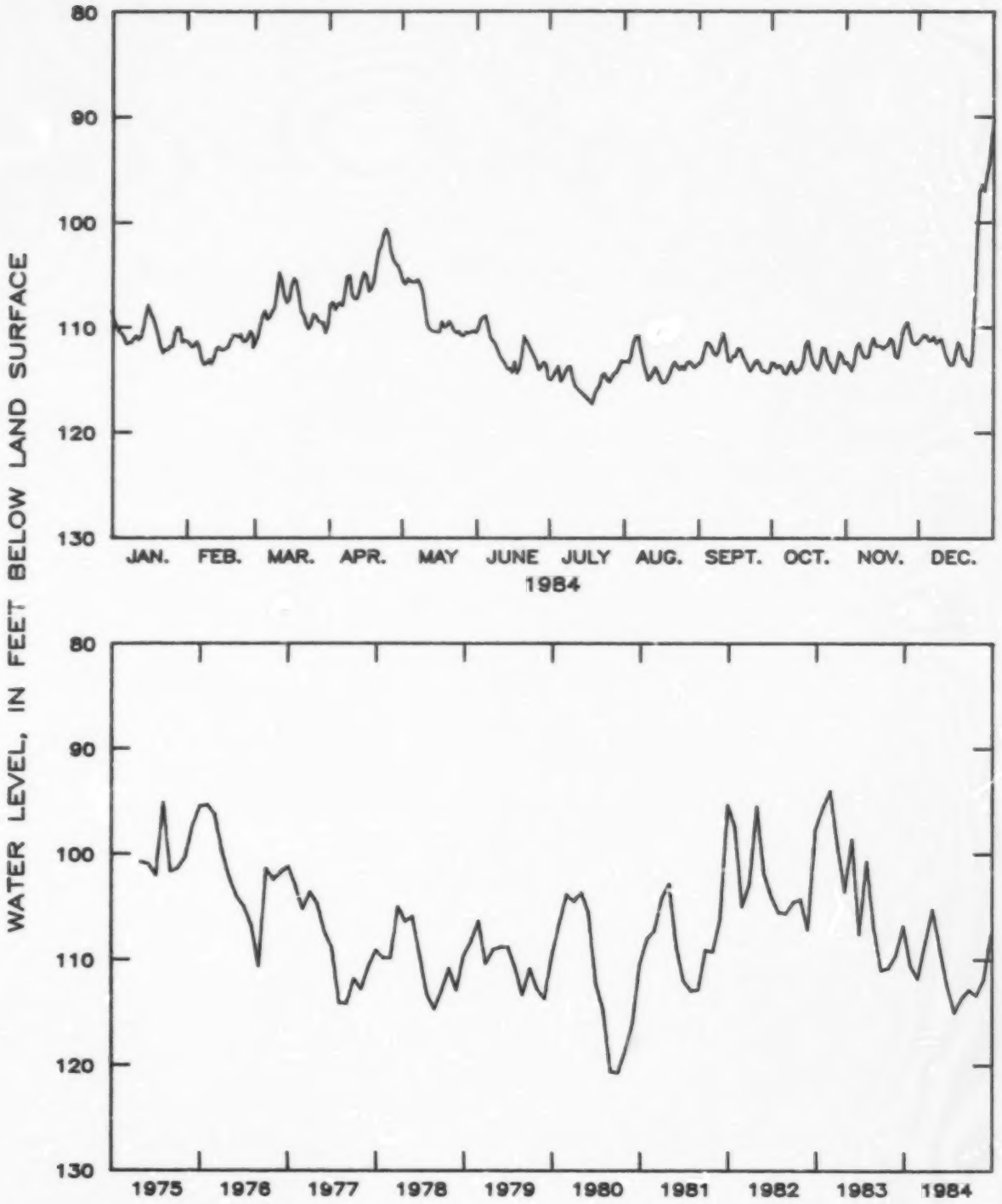

Figure 2.7.4.1-2.--Water level in observation well 36Q008, Chatham County.

36Q020 MORRISON CHATHAM COUNTY

320021081124801 Local number, 36Q020.
LOCATION.--Lat 32°00'18", long 81°12'48", Hydrologic Unit 03060204, 2.7 mi south of intersection of U.S. Highway 17 with Dean Forest Road.
Owner: H. J. Morrison.
AQUIFER.--Floridan aquifer system.
WELL CHARACTERISTICS.--Drilled unused domestic well, diameter 3 in., depth 365 ft, cased to 330 ft, open hole.
DATUM.--Altitude of land-surface datum is 13 ft.
Measuring point: Floor of recorder shelter, 3.88 ft above land-surface datum.
REMARKS.--Water levels for period of missing recorder record, February 23-28, were estimated.
PERIOD OF RECORD.--March 1958 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 17.66 ft below land-surface datum, June 28, 1958; lowest, 49.15 ft below land-surface datum, September 6 and 7, 1980.

Water level, in feet below land surface, through calendar year 1984 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	45.56	45.01	44.78	44.09	43.76	45.53	47.26	47.66	48.56	47.80	47.52	46.52
2	45.62	45.02	44.80	44.08	43.76	45.53	47.28	47.72	48.64	47.82	47.40	46.48
3	45.12	44.82	44.84	43.95	43.62	45.61	47.28	47.74	48.66	47.74	47.30	46.43
4	45.60	44.60	44.86	43.78	43.58	45.76	47.24	47.74	48.66	47.74	47.22	46.48
5	45.45	44.60	44.74	43.73	43.74	45.98	47.24	47.76	48.67	47.76	47.18	46.34
6	45.40	44.75	44.56	43.86	43.82	46.16	47.24	47.74	48.63	47.78	47.30	46.24
7	45.44	45.04	44.62	43.92	43.92	46.38	47.26	47.70	48.62	47.70	47.36	46.43
8	45.53	45.27	44.68	44.00	43.94	46.53	47.38	47.72	48.52	47.65	47.37	46.40
9	45.53	45.38	44.62	43.92	43.94	46.66	47.42	47.82	48.34	47.59	47.27	46.37
10	45.44	45.41	44.62	43.82	43.96	46.80	47.48	47.90	48.24	47.55	47.13	46.30
11	45.16	45.38	44.54	43.80	44.04	46.88	47.50	48.00	48.21	47.53	47.01	46.21
12	45.38	45.32	44.55	43.80	44.10	46.98	47.63	48.16	48.24	47.51	47.04	46.18
13	45.74	45.10	44.59	43.72	44.18	46.95	47.84	48.28	48.25	47.42	47.15	46.26
14	45.26	44.97	44.41	43.64	44.28	46.96	48.00	48.42	48.24	47.35	47.20	46.42
15	45.42	45.05	44.41	43.54	44.42	46.96	48.06	48.52	48.22	47.38	47.04	46.42
16	45.02	45.06	44.21	43.55	44.51	47.07	48.07	48.62	48.32	47.49	46.92	46.41
17	44.94	44.98	44.10	43.58	44.67	47.17	48.12	48.58	48.28	47.56	46.95	46.39
18	44.82	44.94	44.09	43.70	44.78	47.22	48.16	48.52	48.14	47.57	46.84	46.34
19	44.76	44.92	44.06	43.77	44.86	47.37	48.20	48.52	48.01	47.56	46.78	46.30
20	44.84	44.91	43.93	43.85	45.04	47.53	48.15	48.55	47.90	47.57	46.85	46.22
21	44.98	44.84	43.86	43.88	45.23	47.54	48.00	48.66	47.90	47.60	46.88	46.21
22	45.20	44.86	44.03	43.83	45.41	47.50	47.97	48.60	48.06	47.60	46.82	46.20
23	45.19	44.83	44.10	43.68	45.46	47.46	48.06	48.46	48.08	47.57	46.60	46.28
24	45.04	44.80	44.05	43.66	45.47	47.42	48.04	48.46	48.00	47.55	46.61	46.24
25	45.04	44.77	43.94	43.64	45.42	47.38	47.99	48.49	48.04	47.56	46.66	46.28
26	45.11	44.74	44.02	43.61	45.65	47.33	47.88	48.50	48.01	47.50	46.70	46.30
27	44.88	44.71	43.95	43.60	45.73	47.35	47.90	48.42	48.03	47.50	46.66	46.18
28	44.90	44.68	43.66	43.62	45.70	47.33	47.94	48.39	47.86	47.54	46.51	45.99
29	44.96	44.65	43.89	43.70	45.56	47.26	47.90	48.38	47.78	47.54	46.49	45.81
30	44.97	---	44.06	43.70	45.50	47.20	47.72	48.42	47.77	47.53	46.46	45.66
31	45.04	---	44.08	---	45.52	---	47.66	48.44	---	47.54	---	45.50
MEAN	45.19	44.94	44.30	43.77	44.63	46.86	47.74	48.22	48.23	47.58	46.97	46.25

CAL YR 1984 MEAN 46.23 HIGH 43.54 LOW 48.67

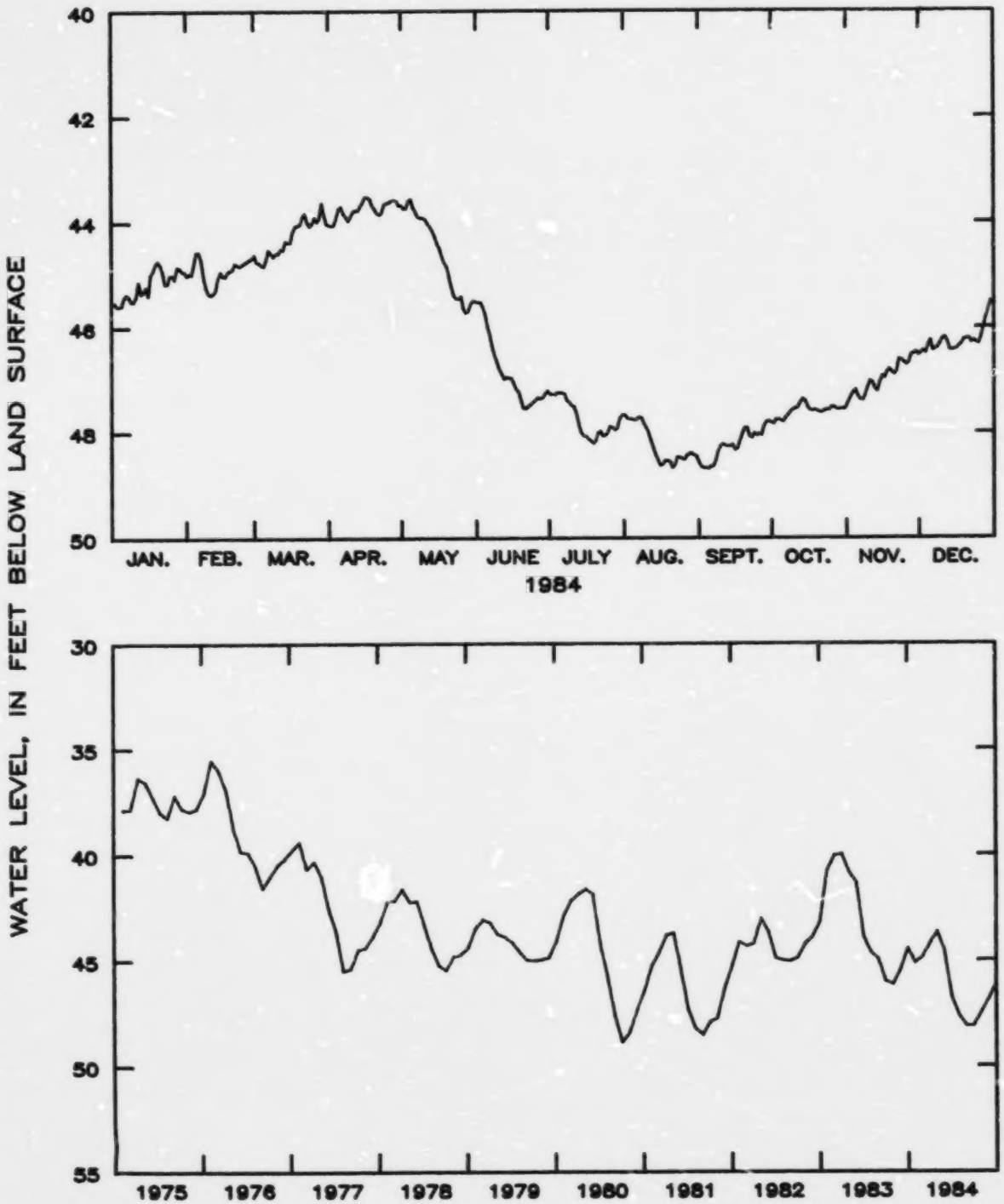

Figure 2.7.4.1–3.––Water level in observation well 36Q020, Chatham County.

38Q002 PILOT HOUSE CHATHAM COUNTY

320202080541201 Local number, 38Q002.
LOCATION.--Lat 32°02'02", long 80°54'12", Hydrologic Unit 03060204, Cockspur Island, near pilot house.
Owner: U.S. Department of the Interior, National Park Service.
AQUIFER.--Floridan aquifer system.
WELL CHARACTERISTICS.--Drilled observation well, diameter 8 in., depth 348 ft, cased to 110 ft, open hole.
DATUM.--Altitude of land-surface datum is 8.0 ft.
Measuring point: Floor of recorder shelter, 3.62 ft above land-surface datum.
REMARKS.--Borehole geophysical survey conducted June 16, 1961. Water levels for period of missing recorder record, July 8-17, were estimated.
PERIOD OF RECORD.--February 1956 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 16.0 ft below land-surface datum, March 5, 1956; lowest, 35.60 ft below land-surface datum, September 2-6, 1980.

Water level, in feet below land surface, through calendar year 1984 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	32.00	31.72	31.71	31.01	31.18	31.79	33.66	34.36	34.56	34.06	33.52	33.12
2	31.96	31.70	31.54	31.03	31.07	31.95	33.63	34.40	34.62	34.12	33.53	33.02
3	31.92	31.52	31.44	30.92	31.06	31.97	33.74	34.50	34.64	34.10	33.20	33.10
4	31.96	31.37	31.36	30.84	31.11	31.95	33.69	34.52	34.72	34.22	33.23	33.02
5	31.93	31.52	31.19	31.11	31.12	32.13	33.76	34.40	34.66	34.16	33.38	32.72
6	31.78	31.43	31.20	31.07	31.26	32.24	33.84	34.34	34.39	34.08	33.51	32.94
7	31.84	31.81	31.29	31.06	31.29	32.49	33.90	34.32	34.34	33.90	33.44	33.15
8	31.93	31.84	31.36	30.93	31.20	32.75	33.99	34.32	34.27	33.86	33.40	33.05
9	32.02	31.83	31.42	30.72	31.29	32.79	34.08	34.39	34.08	33.84	33.36	33.02
10	31.61	31.76	31.26	30.63	31.25	32.79	34.18	34.39	34.15	33.77	33.30	32.97
11	31.64	31.68	31.24	30.69	31.27	32.91	34.27	34.38	34.20	33.75	33.36	32.88
12	31.71	31.52	31.13	30.70	31.22	32.97	34.36	34.51	34.38	33.76	33.32	32.72
13	31.70	31.34	31.14	30.70	31.28	32.99	34.45	34.66	34.52	33.76	33.30	32.74
14	31.69	31.32	31.24	30.69	31.28	33.05	34.54	34.78	34.48	33.66	33.36	32.91
15	31.51	31.30	31.22	30.60	31.20	33.15	34.63	34.95	34.48	33.64	33.29	32.97
16	31.42	31.30	31.10	30.76	31.28	33.25	34.73	34.82	34.30	33.68	33.34	32.80
17	31.33	31.29	30.96	30.99	31.34	33.34	34.82	34.78	34.14	33.83	33.22	32.80
18	31.31	31.28	30.83	31.04	31.49	33.37	34.91	34.70	34.04	33.89	33.12	32.70
19	31.46	31.29	30.83	31.16	31.68	33.51	34.96	34.67	34.03	33.89	33.15	32.62
20	31.49	31.22	30.59	31.15	31.75	33.53	34.90	34.68	34.03	33.84	33.17	32.52
21	31.38	31.18	31.02	31.13	31.74	33.40	34.84	34.64	34.09	33.84	32.96	32.46
22	31.70	31.26	31.17	31.04	31.79	33.41	34.49	34.60	34.22	33.86	32.84	32.49
23	31.64	31.14	31.15	30.96	31.94	33.30	34.56	34.55	34.25	33.82	32.62	32.61
24	31.63	31.52	31.00	31.24	31.88	33.39	34.54	34.59	34.32	33.78	32.70	32.48
25	31.64	31.52	30.81	31.14	31.88	33.40	34.48	34.36	34.33	33.72	32.92	32.72
26	31.65	31.43	30.86	31.22	32.09	33.48	34.40	34.40	34.28	33.52	33.02	32.70
27	31.45	31.10	30.91	31.14	32.08	33.48	34.45	34.22	34.26	33.57	33.08	32.80
28	31.58	31.46	30.60	31.17	32.10	33.53	34.40	34.29	33.94	33.68	33.03	32.76
29	31.63	31.34	31.34	31.14	32.07	33.53	34.32	34.44	34.02	33.74	33.01	32.78
30	31.70	---	31.16	31.12	31.90	33.60	34.10	34.54	33.97	33.72	33.02	32.76
31	31.98	---	31.06	---	31.83	---	34.32	34.62	---	33.65	---	32.68
MEAN	31.67	31.47	31.15	30.97	31.52	32.97	34.31	34.52	34.29	33.83	33.19	32.81

CAL YR 1984 MEAN 32.73 HIGH 30.59 LOW 34.96

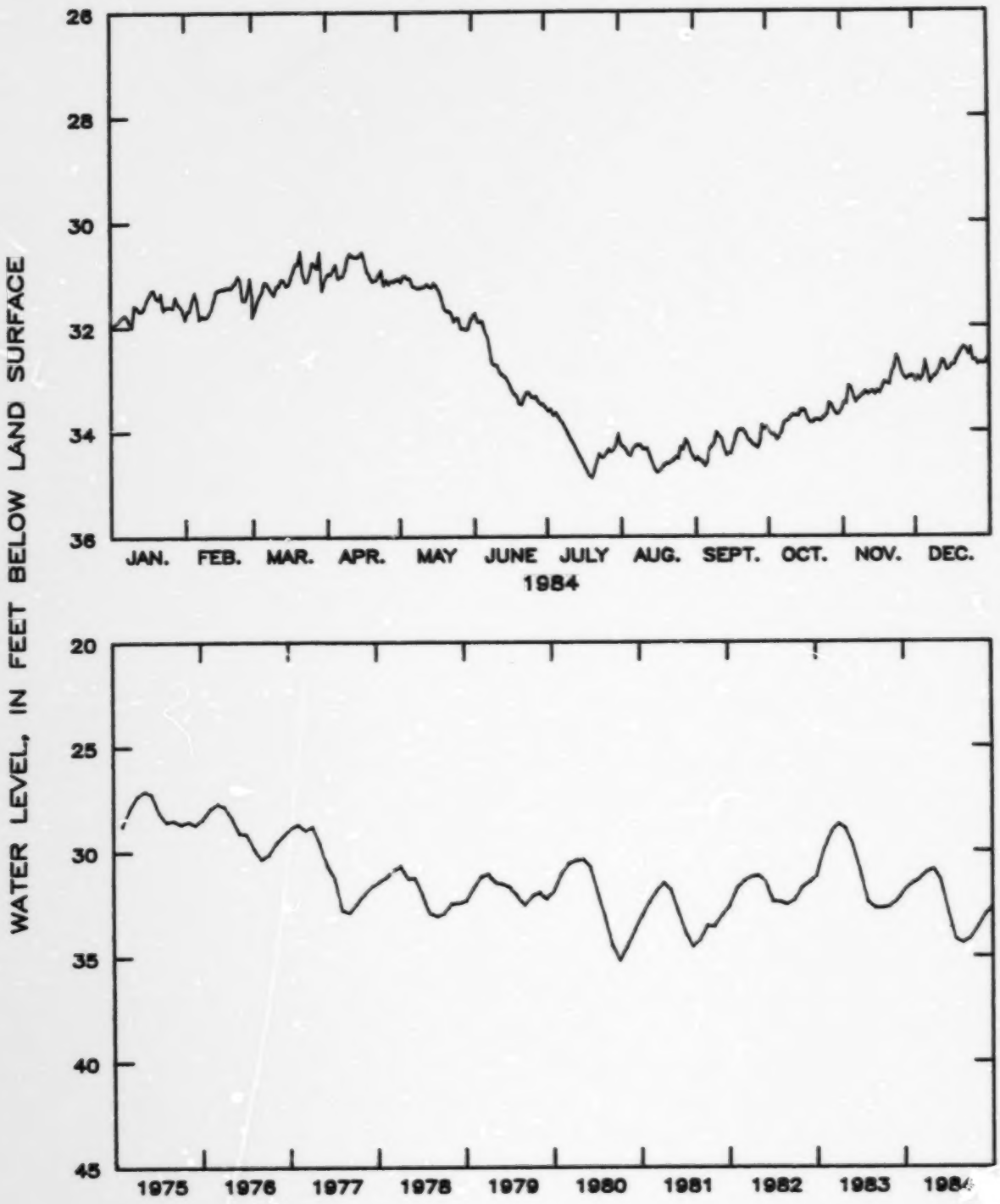

Figure 2.7.4.1—4.——Water level in observation well 38Q002, Chatham County.

39Q003 TEST WELL 7 CHATHAM COUNTY

320122080510202 Local number, 39Q003.
LOCATION.--Lat 32°01'22", long 80°51'02", Hydrologic Unit 03060204, Tybee Island near Fort Screven.
Owner: U.S. Geological Survey, test well 7.
AQUIFER.--Floridan aquifer system.
WELL CHARACTERISTICS.--Drilled observation well, diameter 10 in., depth 600 ft, cased to 129 ft, open hole.
DATUM.--Altitude of land-surface datum is 7.0 ft.
Measuring point: Top of 10-in. casing, 2.0 ft above land-surface datum.
REMARKS.--Borehole geophysical survey conducted January 24, 1962. Water levels for periods of missing recorder record, June 5-7, 13, 15-20, 27-29, July 1-17, and August 1-2, were estimated.
PERIOD OF RECORD.--May 1952 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 17.8 ft below land-surface datum, April 11, 1963; lowest, 29.65 ft below land-surface datum, July 27, 1981.

Water level, in feet below land surface, through calendar year 1984 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	26.90	26.00	26.42	25.38	25.72	26.06	28.05	28.33	29.08	28.00	27.56	27.35
2	26.74	25.96	25.98	25.38	25.56	26.70	28.01	28.65	29.18	28.06	27.71	27.24
3	26.70	25.64	25.67	25.24	25.50	26.88	28.12	28.98	29.25	28.11	27.42	27.30
4	26.50	25.56	25.80	25.20	25.70	26.54	28.06	29.16	28.87	28.24	27.32	27.35
5	26.18	25.83	25.46	25.46	25.62	26.64	28.12	29.02	28.81	28.28	27.52	26.88
6	26.14	26.20	25.48	25.60	25.91	26.74	28.19	28.93	28.35	28.18	27.72	27.16
7	26.22	26.14	25.56	25.51	25.86	26.84	28.25	28.81	28.32	27.99	27.60	27.60
8	26.22	26.11	25.62	25.38	25.80	26.94	28.33	28.91	28.32	27.92	27.56	27.37
9	26.34	26.08	25.81	25.08	25.80	27.06	28.41	29.12	28.09	27.85	27.82	27.30
10	25.92	25.98	25.58	24.92	25.79	27.51	28.50	28.99	28.12	27.80	27.47	27.25
11	25.98	25.92	25.58	25.02	25.90	27.32	29.03	28.92	28.31	27.80	27.64	27.16
12	25.98	25.76	25.44	25.09	25.90	27.70	28.67	29.00	28.70	27.82	27.56	26.88
13	25.98	25.46	25.47	25.08	25.95	27.44	28.75	29.09	28.90	27.86	27.43	26.93
14	25.93	25.40	25.68	25.10	25.93	27.18	28.83	29.14	28.69	27.79	27.50	27.10
15	25.76	25.54	25.70	25.20	25.74	27.22	28.91	29.19	28.66	27.69	27.40	27.02
16	25.62	25.56	25.56	25.32	25.65	27.26	29.01	29.00	28.47	27.71	27.59	27.03
17	25.66	25.56	25.56	25.56	25.64	27.31	29.09	28.94	28.04	27.90	27.42	26.98
18	25.66	25.56	25.32	25.57	25.86	27.35	29.17	28.84	28.02	27.98	27.35	26.91
19	25.97	25.66	25.32	25.52	26.08	27.39	29.20	28.92	28.00	28.01	27.52	26.82
20	25.90	25.48	25.00	25.56	26.31	27.44	29.05	28.90	28.06	28.01	27.52	26.74
21	25.78	25.41	25.24	25.55	26.12	27.48	28.80	28.68	28.10	28.06	27.20	26.68
22	26.14	25.14	25.49	25.54	26.04	27.41	28.65	28.64	28.70	28.05	26.98	26.72
23	26.06	25.32	25.66	25.40	26.08	27.62	28.76	28.76	28.76	28.01	26.77	26.85
24	26.00	25.93	25.36	25.80	26.11	27.64	28.75	28.80	28.50	28.00	26.93	26.62
25	26.05	25.78	25.20	25.60	26.08	28.87	29.00	28.55	28.50	27.88	27.16	26.92
26	26.04	25.58	25.38	25.79	26.70	27.73	28.71	28.73	28.63	27.64	27.23	26.80
27	25.74	25.16	25.22	25.63	26.42	27.80	28.80	28.42	28.35	27.72	27.23	26.98
28	25.90	25.38	24.86	25.89	26.36	27.87	28.90	28.49	27.87	27.80	27.15	26.95
29	25.86	26.70	25.96	25.62	26.38	27.93	28.78	28.70	27.99	27.88	27.20	27.06
30	25.88	---	25.62	25.62	26.16	28.00	28.32	28.92	27.92	27.82	27.20	27.06
31	26.29	---	25.42	---	26.03	---	28.52	29.04	---	27.76	---	26.95
MEAN	26.06	25.73	25.53	25.42	25.96	27.33	28.64	28.86	28.45	27.92	27.39	27.03

CAL YR 1984 MEAN 27.03 HIGH 24.86 LOW 29.25

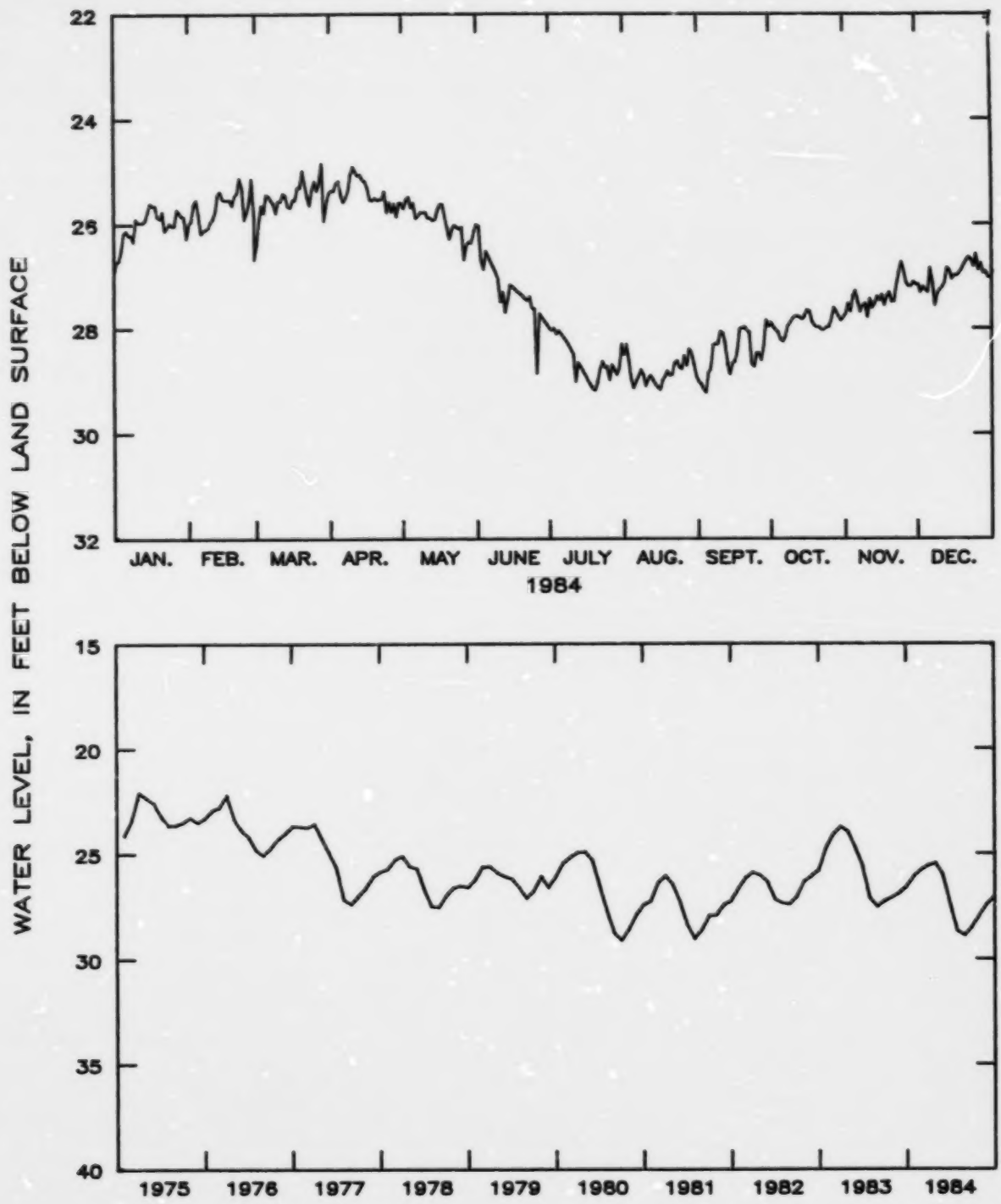

Figure 2.7.4.1–5.––Water level in observation well 39Q003, Chatham County.

2.7.4.2 Jesup-Riceboro area

Ground-water levels in the Floridan aquifer system are affected by industrial pumping of about 70 Mgal/d in the Jesup area and about 10 Mgal/d at Riceboro. The cessation of the 1980-81 drought and reductions in industrial pumping at Brunswick during 1982 allowed water levels to recover significantly from the record lows of 1981, a trend that continued into 1983. Mean annual water levels showed a slight decline during 1983-84. The 1984 hydrographs for wells 30L003, 31L001, and 33M004 illustrate the effects that partial industrial shutdowns near Jesup have on water levels in these areas. Similarly, the 1984 hydrograph of well 34M054 illustrates the effects that partial industrial shutdowns near Riceboro have on water levels there.

Mean annual water levels in the Jesup-Riceboro area were from 0.8 foot to 1.5 feet lower in 1984 than in 1983.

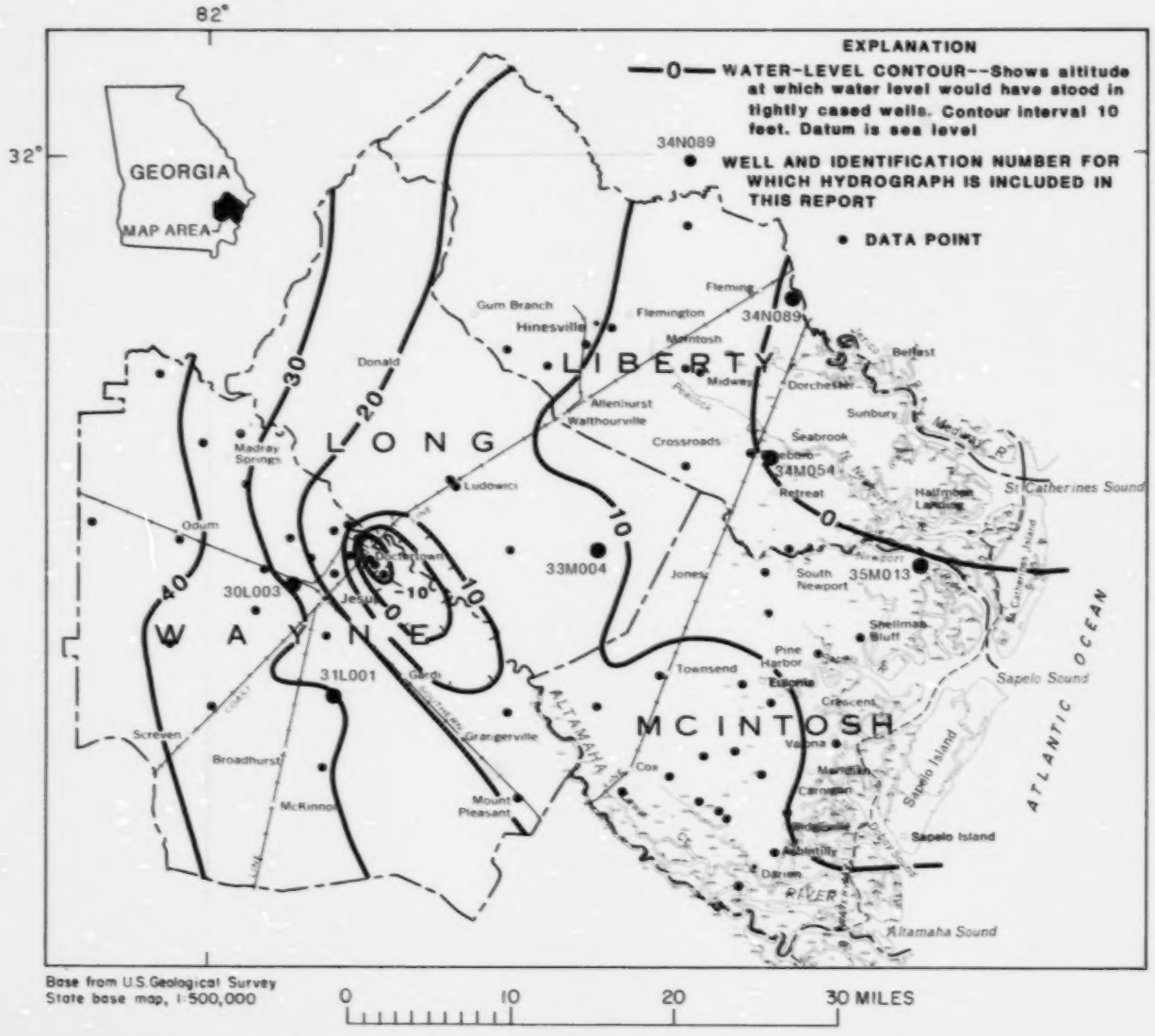

Figure 2.7.4.2-1.—Observation well locations and the water level in the Floridan aquifer system in the Jesup-Riceboro area, October-November 1984.

30L003 JOHNSON WAYNE COUNTY

313701081543501 Local number, 30L003.
LOCATION.--Lat 31°37'01", long 81°54'35", Hydrologic Unit 03070106, about 0.5 mi west of Jesup city limits near intersection of Highway 341 and Sunset Drive.
Owner: City of Jesup Housing Authority.
AQUIFER.--Floridan aquifer system.
WELL CHARACTERISTICS.--Drilled unused domestic well, diameter 4 in., depth 584 ft, cased to 472 ft, open hole.
DATUM.--Altitude of land-surface datum is 107 ft.
Measuring point: Floor of recorder shelter, 2.88 ft above land-surface datum.
REMARKS.--Borehole geophysical survey conducted August 19, 1963. Water levels for periods of missing recorder record, April 27 to May 9 and November 3-4, were estimated.
PERIOD OF RECORD.--January 1964 to March 1967. February 1976 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 59.98 ft below land-surface datum, April 19, 1964; lowest 85.27 ft below land-surface datum, June 29, 1981.

Water level, in feet below land surface, through calendar year 1984 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	77.84	77.62	77.09	76.74	76.92	78.02	78.65	79.24	79.07	78.47	80.02	79.78
2	74.92	77.96	77.84	76.91	76.94	78.07	78.64	79.26	79.04	78.66	80.04	79.86
3	74.92	77.95	77.99	76.82	76.97	78.09	78.72	79.24	78.86	78.76	80.00	79.81
4	78.28	77.82	78.16	76.73	76.99	78.13	78.85	79.12	76.87	78.82	79.95	79.86
5	75.30	77.74	78.19	76.90	77.02	78.20	78.97	79.01	75.81	78.84	79.90	79.82
6	75.37	77.88	78.05	76.97	77.04	78.28	78.84	79.07	75.09	78.94	79.94	79.79
7	75.58	78.07	78.02	76.95	77.07	78.38	78.94	79.16	74.50	79.09	80.03	79.96
8	75.87	78.20	78.03	77.06	77.09	78.40	78.96	79.18	73.99	79.17	80.14	80.05
9	75.97	78.21	78.07	77.06	77.12	78.36	79.10	79.15	73.44	79.04	80.13	80.09
10	75.90	78.18	78.09	77.15	77.14	78.39	79.08	79.09	72.96	78.96	80.10	80.08
11	76.37	78.18	78.03	77.35	77.20	78.49	78.90	79.14	72.63	79.02	79.98	80.07
12	76.95	78.16	77.22	77.36	77.12	78.60	78.84	79.22	72.48	79.10	79.95	80.05
13	77.25	78.06	75.73	77.23	77.16	78.53	78.98	79.36	73.01	79.12	79.98	80.09
14	77.34	77.91	74.63	77.09	77.24	78.44	79.06	79.41	74.00	79.13	79.98	80.24
15	77.33	77.91	73.88	77.06	77.37	78.45	79.13	79.40	74.96	79.26	80.02	80.36
16	77.33	77.82	73.13	77.12	77.51	78.44	79.21	79.44	75.66	79.44	80.06	80.40
17	77.41	77.75	72.46	77.26	77.58	78.46	79.19	79.27	76.18	79.53	80.09	80.59
18	77.46	77.77	71.91	77.40	77.57	78.49	79.13	78.98	76.60	79.57	80.01	80.23
19	77.54	77.84	71.65	77.52	77.60	78.45	79.11	78.84	76.97	79.58	79.94	80.08
20	77.64	77.97	72.31	77.45	77.68	78.42	79.13	78.88	77.20	79.62	80.18	79.87
21	77.74	77.88	73.40	77.28	77.82	78.50	79.18	79.02	77.57	79.71	80.27	79.86
22	77.87	77.82	74.31	77.04	77.97	78.52	79.22	79.12	77.90	79.80	80.06	79.77
23	77.95	77.73	74.83	76.66	78.00	78.44	79.29	79.12	78.04	79.88	79.96	79.16
24	77.88	77.77	75.07	76.30	77.96	78.40	79.37	79.20	78.20	79.94	79.56	78.11
25	77.73	77.95	75.25	76.52	78.03	78.49	79.42	79.36	78.23	80.04	79.56	78.28
26	77.61	78.10	75.54	76.80	78.09	78.60	79.46	79.42	78.23	80.06	79.62	76.69
27	77.41	77.93	75.77	76.82	78.10	78.64	79.41	79.38	78.35	80.04	79.84	76.26
28	77.42	77.78	75.68	76.85	78.08	78.68	79.42	79.26	78.36	80.02	79.82	76.39
29	77.56	77.79	75.87	76.87	78.06	78.67	79.40	79.14	78.30	79.93	79.75	77.08
30	77.52	---	76.31	76.90	77.99	78.64	79.30	79.13	78.35	79.84	79.92	77.64
31	77.49	---	76.56	---	77.97	---	79.22	79.10	---	79.91	---	78.00
MEAN	76.75	77.92	75.80	77.01	77.50	78.42	79.09	79.18	76.34	79.39	79.96	79.30

CAL YR 1984 MEAN 78.06 HIGH 71.65 LOW 80.59

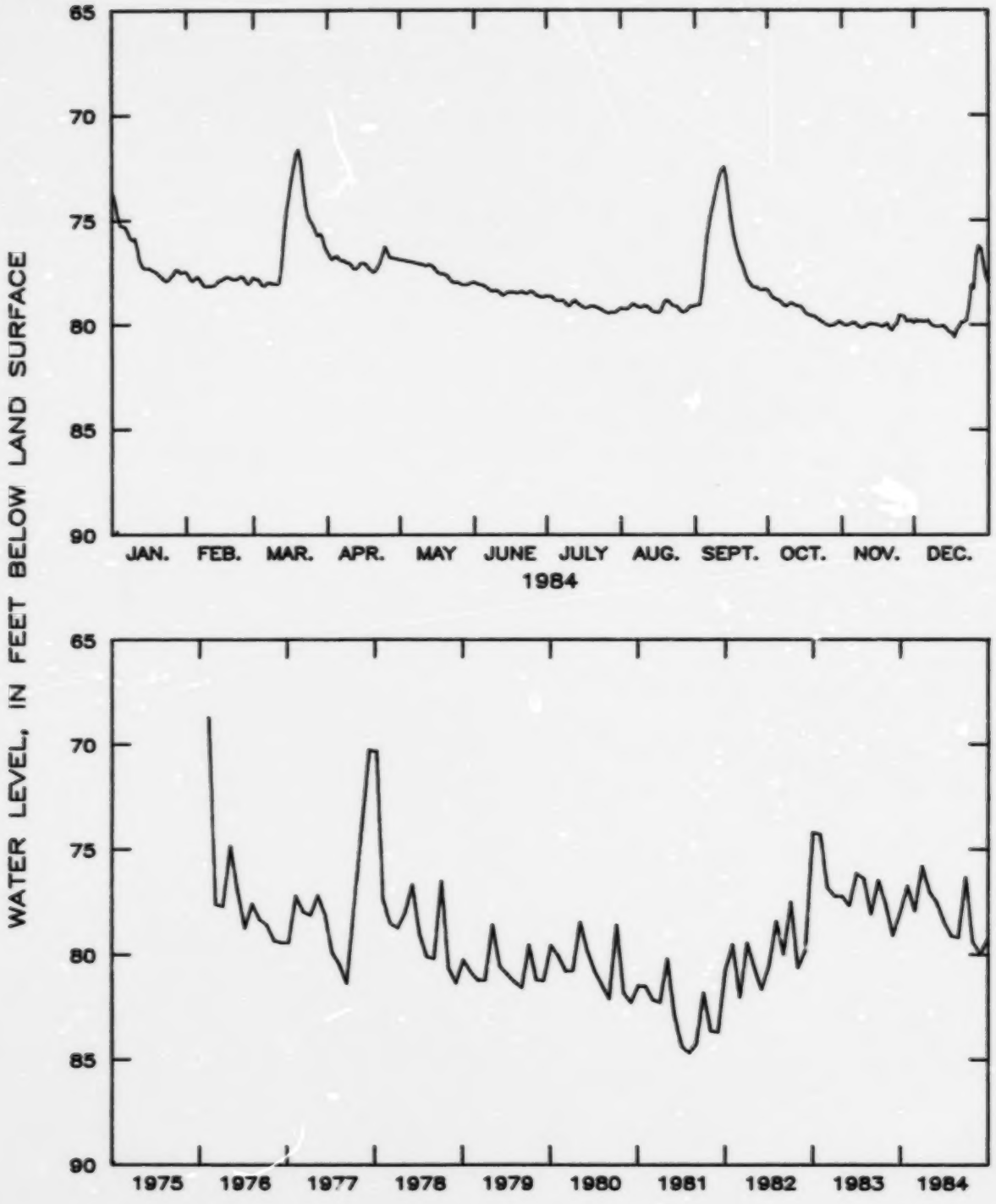

Figure 2.7.4.2–2.––Water level in observation well 30L003, Wayne County.

31L001 MEARS 2 WAYNE COUNTY

313055081521901 Local number, 31L001.
LOCATION.—Lat 31°31'02", long 81°52'22", Hydrologic Unit 03070106, about 6 mi south of Jesup near Penholoway Creek on Walker Creek.
Owner: Brunswick Pulp and Paper, Justice Mears 2.
AQUIFER.—Floridan aquifer system.
WELL CHARACTERISTICS.—Drilled unused oil-test well, diameter 6 in., depth 691 ft, cased to 587 ft, open hole.
DATUM.—Altitude of land-surface datum is 55 ft.
Measuring point: Top of 6-in. casing at land-surface datum.
REMARKS.—Well pumped and water quality sampled, August 2, 1978.
PERIOD OF RECORD.—February 1976 to current year.
EXTREMES FOR PERIOD OF RECORD.—Highest water level, 15.30 ft below land-surface datum, December 16, 1977; lowest 29.23 ft below land-surface datum, June 29, 1981.

Water level, in feet below land surface, through calendar year 1984 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	20.80	22.53	22.65	21.40	21.66	22.53	23.37	23.87	23.90	23.38	24.48	24.42
2	20.31	22.62	22.62	21.52	21.62	22.58	23.42	23.91	23.94	23.45	24.42	24.47
3	20.59	22.52	22.69	21.41	21.46	22.58	23.45	23.88	23.52	23.52	24.40	24.45
4	20.80	22.43	22.77	21.34	21.44	22.63	23.47	23.82	22.70	23.58	24.34	24.52
5	20.80	22.48	22.68	21.38	21.61	22.76	23.50	23.78	21.98	23.62	24.35	24.40
6	20.83	22.63	22.48	21.52	21.62	22.86	23.48	23.80	21.48	23.68	24.46	24.42
7	21.08	22.86	22.58	21.55	21.60	22.91	23.47	23.86	21.08	23.77	24.58	24.61
8	21.27	22.96	22.67	21.64	21.48	23.00	23.54	23.86	20.66	23.76	24.64	24.50
9	21.49	22.96	22.66	21.54	21.57	22.95	23.65	23.82	20.76	23.73	24.59	24.59
10	21.26	22.91	22.67	21.58	21.66	23.00	23.72	23.83	19.70	23.72	24.50	24.56
11	21.54	22.88	22.62	21.46	21.78	23.12	23.66	23.80	19.44	23.75	24.42	24.52
12	21.98	22.83	22.25	21.74	21.72	23.16	23.55	23.87	19.26	23.78	24.50	24.52
13	22.19	22.72	21.44	21.64	21.75	23.14	23.70	24.01	19.50	23.73	24.58	24.61
14	22.30	22.67	20.73	21.57	21.76	23.07	23.74	24.00	20.02	23.70	24.60	24.76
15	22.31	22.73	20.15	21.51	21.84	23.12	23.78	24.04	20.58	23.81	24.61	24.84
16	22.27	22.70	19.55	21.54	21.95	23.14	23.83	24.00	21.08	23.96	24.57	24.90
17	22.35	22.65	19.05	21.64	22.08	23.12	23.74	23.94	21.48	24.09	24.64	24.80
18	22.34	22.62	18.62	21.78	22.09	23.08	23.74	23.78	21.78	24.14	24.52	24.75
19	22.44	22.61	18.29	21.88	22.06	23.12	23.78	23.65	22.04	24.14	24.43	24.69
20	22.55	22.59	18.53	21.88	22.09	23.12	23.80	23.68	22.19	24.14	24.65	24.58
21	22.64	22.60	19.10	21.78	22.16	23.16	23.78	23.81	22.45	24.21	24.80	24.54
22	22.74	22.55	19.69	21.62	22.26	23.18	23.80	23.85	22.75	24.28	24.70	24.50
23	22.73	22.52	20.03	21.42	22.30	23.14	23.86	23.84	22.92	24.35	24.46	24.28
24	22.61	22.57	20.29	21.30	22.35	23.15	23.95	23.84	23.02	24.42	24.35	23.68
25	22.53	22.64	20.37	21.34	22.40	23.13	23.94	24.00	23.07	24.47	24.34	23.10
26	22.48	22.74	20.35	21.50	22.46	23.20	24.00	24.10	23.11	24.46	24.42	22.67
27	22.27	22.54	20.61	21.57	22.49	23.26	23.96	24.06	23.22	24.48	24.42	22.31
28	22.30	22.48	20.45	21.51	22.52	23.32	23.99	23.99	23.17	24.46	24.36	22.24
29	22.39	22.60	20.70	21.58	22.49	23.28	23.95	23.96	23.16	24.41	24.39	22.52
30	22.37	---	21.08	21.59	22.42	23.29	23.85	23.96	23.22	24.37	24.34	22.86
31	22.44	---	21.26	---	22.48	---	23.82	23.88	---	24.42	---	23.07
MEAN	21.91	22.66	21.03	21.55	21.97	23.04	23.72	23.89	21.89	23.99	24.50	24.12

CAL YR 1984 MEAN 22.96 HIGH 18.29 LOW 24.90

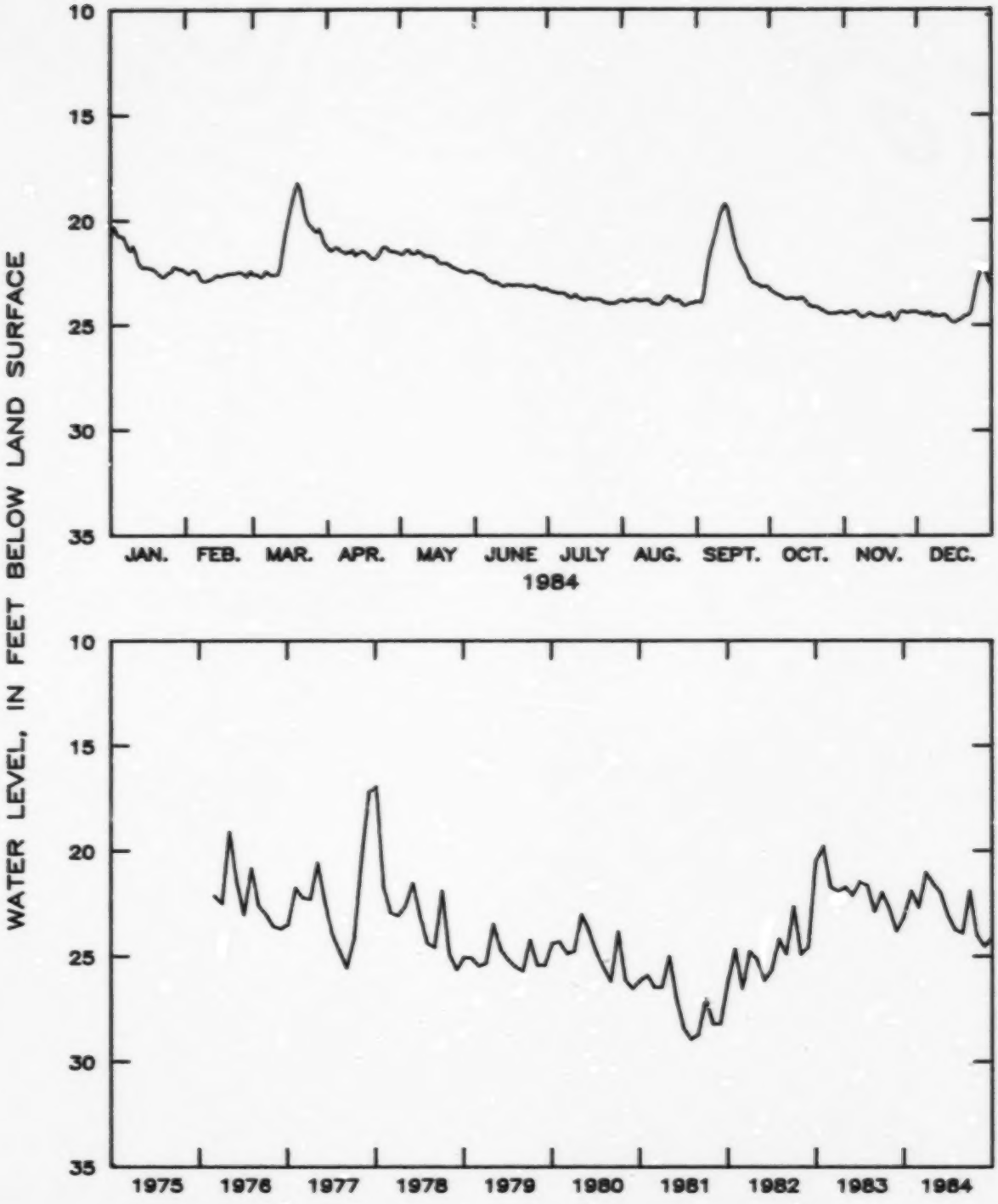

Figure 2.7.4.2–3.––Water level in observation well 31L001, Wayne County.

33M004 TEST WELL 3 LONG COUNTY

313845081361701 Local number, 33M004.
LOCATION.--Lat 31°38'54", long 81°36'04", Hydrologic Unit 03070106, 9 mi southeast of Ludowici, at Hope Cemetery.
Owner: U.S. Geological Survey, test well 3.
AQUIFER.--Floridan aquifer system.
WELL CHARACTERISTICS.--Drilled observation well, diameter 4-3 in, depth 872 ft, cased to 538 ft, open hole.
DATUM.--Altitude of land-surface datum is 61.2 ft.
Measuring point: Top of recorder shelter, 3.5 ft above land-surface datum.
REMARKS.--Well pumped and sounded June 17, 1976, to depth of 861 ft; water-quality sample collected. Borehole geophysical survey conducted July 28, 1976. Water levels for period of missing recorder record, May 9-27, were estimated.
PERIOD OF RECORD.--January 1968 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 34.04 ft below land-surface datum, January 14, 1968; lowest, 53.22 ft below land-surface datum, July 27, 1981.

Water level, in feet below land surface, through calendar year 1984 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	47.36	48.01	48.40	47.19	47.83	48.30	48.61	49.44	49.74	49.75	49.78	49.80
2	47.46	48.10	48.19	47.26	47.74	48.29	48.91	49.51	49.81	49.87	49.69	49.84
3	47.52	47.97	48.39	47.19	47.71	48.34	48.93	49.51	49.76	49.92	49.60	49.95
4	47.37	47.80	48.40	47.09	47.58	48.39	48.92	49.49	49.66	49.94	49.55	49.94
5	47.26	47.15	48.24	47.06	47.72	48.40	48.91	49.48	49.60	49.01	49.54	49.84
6	47.20	48.23	48.06	47.20	47.81	48.38	48.92	49.47	49.52	49.10	49.67	49.80
7	47.39	48.28	48.20	47.32	47.85	48.44	48.94	49.44	49.40	49.15	49.81	49.96
8	47.55	48.41	48.37	47.42	47.76	48.53	48.94	49.43	49.20	49.12	49.87	49.94
9	47.44	48.41	48.39	47.36	47.82	48.60	49.05	49.44	48.96	49.12	49.81	49.91
10	47.25	48.18	48.43	47.31	47.89	48.62	49.07	49.43	48.58	49.14	49.68	49.86
11	47.36	48.36	48.41	47.40	48.05	48.62	49.02	49.42	48.40	49.19	49.62	49.92
12	47.46	48.33	48.41	47.47	48.00	48.64	49.02	49.48	48.26	49.19	49.74	49.82
13	47.23	48.23	48.32	47.46	47.95	48.69	49.08	49.51	48.11	49.12	49.84	49.90
14	47.78	48.19	48.11	47.43	47.85	48.69	49.18	49.58	47.96	49.09	49.93	50.01
15	47.79	48.31	48.19	47.39	47.86	48.68	49.21	49.59	47.85	49.14	49.94	50.08
16	47.73	48.34	47.97	47.42	47.98	48.72	49.16	49.58	48.07	49.25	49.87	50.08
17	47.81	48.30	47.86	47.47	47.84	48.79	49.14	49.52	48.11	49.36	49.89	50.07
18	47.76	48.31	47.63	47.60	47.94	48.78	49.15	49.47	48.12	49.40	49.82	50.05
19	47.65	48.23	47.17	47.70	47.90	45.76	49.21	49.45	48.12	49.41	49.70	50.02
20	47.99	48.23	46.84	47.78	47.99	48.75	49.25	49.49	48.12	49.46	49.99	50.02
21	48.09	48.19	46.71	47.81	48.00	48.76	49.22	49.59	48.20	49.50	50.04	50.01
22	48.00	48.17	46.72	47.76	48.11	48.75	49.21	49.64	48.37	49.56	50.03	50.03
23	48.12	48.13	46.83	47.82	48.12	48.74	49.29	49.58	48.50	49.60	49.90	50.05
24	47.95	48.21	46.98	47.83	48.16	48.75	49.37	49.62	48.55	49.66	49.95	50.03
25	47.89	48.24	46.75	47.74	48.13	48.70	49.38	49.70	48.57	49.70	49.96	50.01
26	47.92	48.30	46.73	47.74	48.16	48.72	49.36	49.79	48.60	49.68	49.87	49.99
27	47.77	48.11	46.76	47.76	48.20	48.75	49.38	49.80	48.65	49.68	49.84	49.95
28	47.76	48.08	46.89	47.81	48.23	48.76	49.42	49.77	48.58	49.70	49.76	49.63
29	47.61	48.29	46.91	47.74	48.10	48.74	49.44	49.77	48.60	49.70	49.74	49.45
30	47.83	---	46.96	47.82	48.36	48.73	49.42	49.74	48.69	49.70	49.74	49.34
31	47.94	---	47.10	---	48.38	---	49.40	49.72	---	49.76	---	49.28
MEAN	47.72	48.20	47.64	47.50	47.97	48.63	49.15	49.56	48.69	49.32	49.80	49.89

CAL YR 1984 MEAN 48.07 HIGH 46.69 LOW 50.08

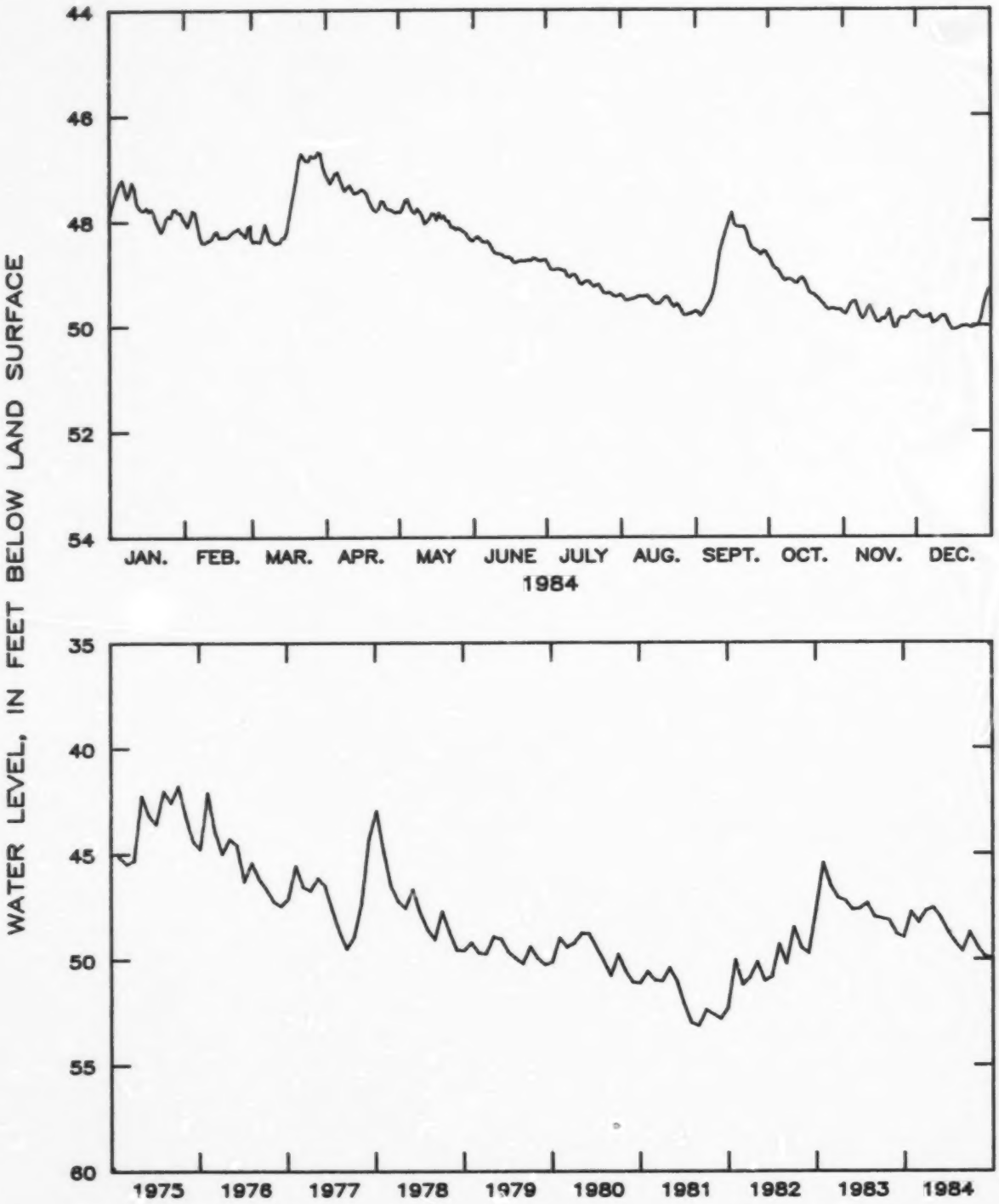

Figure 2.7.4.2–4.––Water level in observation well 33M004, Long County.

34M054 TEST WELL 2 LIBERTY COUNTY

314343081251901 Local number, 34M054.
LOCATION.--Lat 31°43'43", long 81°25'19", Hydrologic Unit 03060204, Riceboro, Ga., near entrance to Interstate Paper Co.
Owner: U.S. Geological Survey, test well 2.
AQUIFER.--Floridan aquifer system.
WELL CHARACTERISTICS.--Drilled observation well, diameter 4 in., depth 802 ft, cased to 467 ft, open hole.
DATUM.--Altitude of land-surface datum is 19 ft.
Measuring point: Floor of recorder shelter, 3.4 ft above land-surface datum.
REMARKS.--Well pumped July 11, 1979; water-quality sample collected at conclusion of pumping. Borehole geophysical survey conducted June 15, 1976.
PERIOD OF RECORD.--February 1967 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 0.85 ft below land-surface datum, February 5, 1967; lowest, 24.30 ft below land-surface datum, December 20, 1981.

Water level, in feet below land surface, through calendar year 1984 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	20.83	20.48	20.46	20.04	19.71	20.20	20.74	21.55	21.69	21.38	19.12	21.84
2	20.86	20.60	20.46	19.90	19.53	20.25	20.82	21.51	21.78	21.52	19.84	21.84
3	21.00	20.48	20.54	19.74	19.32	20.19	20.87	21.58	21.72	21.50	19.08	21.86
4	20.89	20.32	20.48	19.58	19.68	20.22	20.82	21.50	21.71	21.60	19.15	21.92
5	20.58	20.26	20.32	19.59	19.34	20.36	20.85	21.52	21.76	21.64	19.16	21.89
6	20.36	20.35	20.14	19.60	19.53	20.42	20.56	21.50	21.84	21.69	20.08	21.62
7	20.44	20.52	20.27	19.74	19.67	20.52	20.57	21.54	21.88	21.66	21.16	21.82
8	20.58	20.68	20.48	20.00	19.73	20.52	20.77	21.48	21.82	21.64	21.54	22.09
9	20.60	20.76	20.48	20.02	19.80	20.56	20.92	21.53	21.69	21.64	21.63	22.07
10	20.44	20.59	20.60	20.10	19.89	20.54	21.00	21.49	21.58	21.65	21.56	22.16
11	20.50	20.42	20.52	20.24	20.06	20.69	20.98	21.62	21.80	21.67	22.02	22.06
12	20.67	20.40	20.60	20.02	20.02	20.78	20.98	21.54	22.02	21.67	21.78	22.30
13	20.91	20.37	20.52	20.01	19.98	20.67	21.07	21.64	22.08	21.58	21.89	22.57
14	20.70	20.43	20.54	19.85	19.90	20.69	21.16	21.74	22.00	21.47	21.84	22.75
15	20.26	20.45	20.66	19.81	19.92	20.70	21.20	21.90	22.00	21.47	21.78	22.64
16	20.33	20.49	20.58	19.70	20.05	20.77	21.15	21.95	22.02	21.59	21.92	22.53
17	20.21	20.50	20.49	19.82	19.93	20.82	21.13	21.86	22.02	21.68	21.77	22.48
18	20.18	20.41	20.42	19.80	20.04	20.86	20.91	21.72	21.88	21.71	21.62	22.46
19	20.24	20.33	19.92	19.86	20.01	20.83	21.37	21.64	21.73	21.74	21.59	22.44
20	20.39	20.27	19.80	19.88	20.12	20.59	21.44	21.74	21.50	21.76	21.78	22.56
21	20.48	20.20	19.93	19.92	20.14	20.21	21.46	21.86	21.34	21.97	22.04	22.57
22	20.54	20.09	20.14	19.84	20.26	20.26	21.36	21.85	21.48	21.84	21.93	22.54
23	20.72	20.06	20.19	19.70	20.28	20.65	21.37	21.52	21.52	21.81	21.76	22.42
24	20.58	20.11	20.09	19.75	20.34	20.79	21.44	21.70	21.48	21.82	21.70	22.45
25	20.44	20.28	19.92	19.91	20.32	20.74	21.44	21.78	21.46	21.86	21.73	22.50
26	20.34	20.44	19.91	19.92	20.36	20.72	21.54	21.82	21.62	21.80	21.76	22.58
27	20.20	20.21	19.84	19.94	20.42	20.72	21.43	21.70	21.66	21.78	21.78	22.52
28	20.13	20.17	19.40	20.07	20.46	20.71	21.61	21.65	21.42	21.71	21.74	22.50
29	20.15	20.19	19.58	20.10	20.31	20.64	21.58	21.71	21.41	21.28	21.75	22.51
30	20.14	---	19.95	19.56	20.27	20.62	21.58	21.65	21.39	20.31	21.74	22.66
31	20.40	---	20.16	---	20.34	---	21.57	21.64	---	19.84	---	22.46
MEAN	20.49	20.37	20.24	19.87	19.96	20.57	21.15	21.66	21.71	21.56	21.24	22.31

CAL YR 1984 MEAN 20.92 HIGH 18.32 LOW 22.75

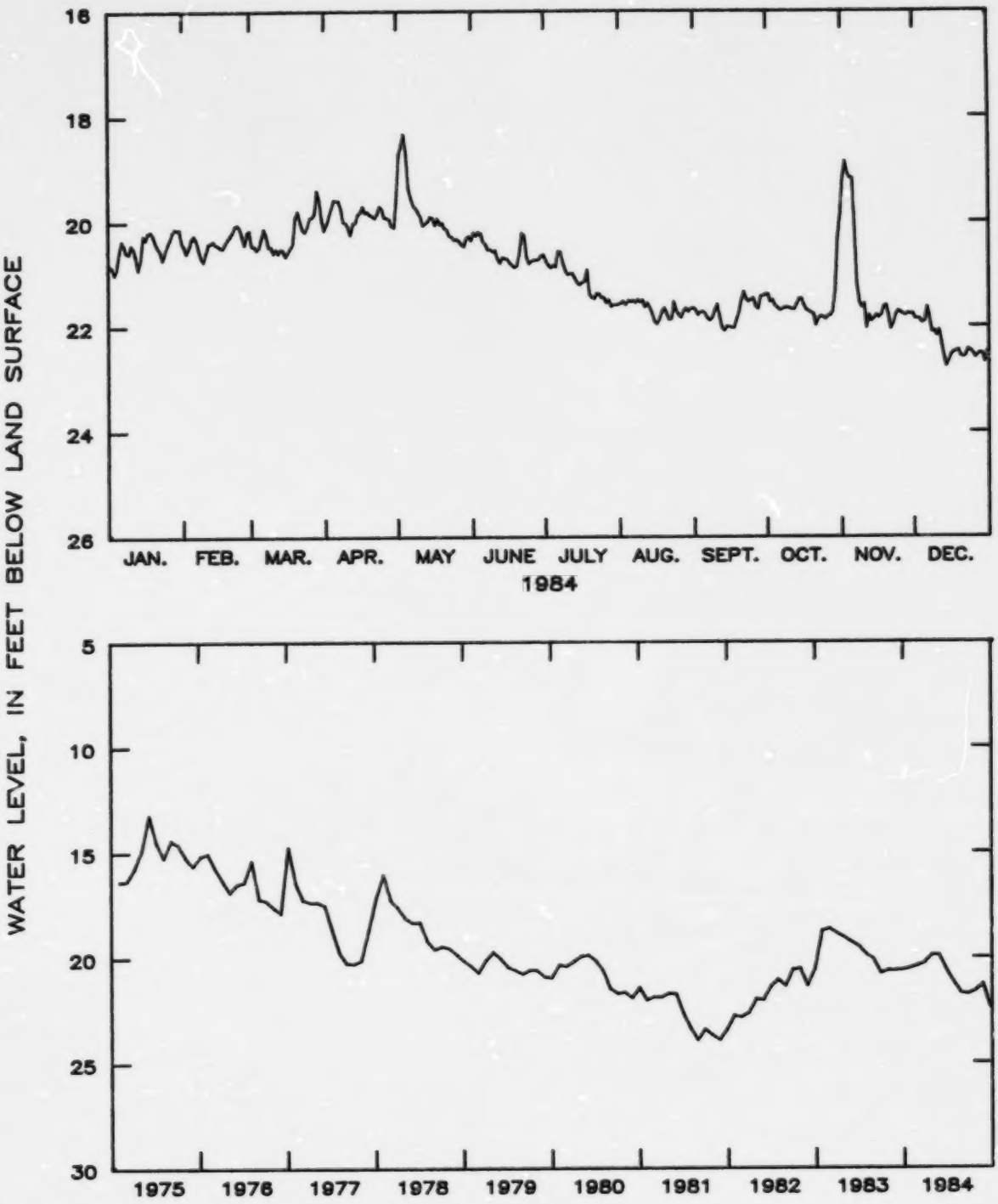

Figure 2.7.4.2–5.––Water level in observation well 34M054, Liberty County.

34N089 TEST WELL 1 LIBERTY COUNTY

315214081235301 Local number, 34N089.
LOCATION.--Lat 31°52'14", long 81°23'53", Hydrologic Unit 03060204, north of Midway, Ga., near intersection of Georgia Highway 196 and U.S. Highway 17.
Owner: U.S. Geological Survey, test well 1.
AQUIFER.--Floridan aquifer system.
WELL CHARACTERISTICS.--Drilled observation well, diameter 4 in., depth 789 ft, cased to 410 ft, open hole.
DATUM.--Altitude of land-surface datum is 17 ft.
Measuring point: Top of 4-in. casing, 1.33 ft above land-surface datum.
REMARKS.--Well pumped July 11, 1979; water-quality sample collected at conclusion of pumping. Borehole geophysical survey conducted June 15, 1976. Water levels for period of missing recorder record, May 30 to June 25, were estimated.
PERIOD OF RECORD.--February 1967 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 2.34 ft below land-surface datum, March 6, 1967; lowest, 22.28 ft below land-surface datum, August 10-11, 1981.

Water level, in feet below land surface, through calendar year 1984 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	19.04	18.54	18.43	18.23	18.09	18.50	19.21	19.82	20.22	20.06	20.05	19.91
2	19.00	18.58	18.44	18.32	18.01	18.53	19.29	19.89	20.30	20.14	19.93	19.93
3	18.90	18.42	18.45	18.16	17.84	18.55	19.32	19.87	20.28	20.10	19.82	19.98
4	18.82	18.24	18.49	18.00	17.76	18.58	19.28	19.86	20.26	20.07	19.72	20.04
5	18.68	18.28	18.35	17.94	17.90	18.63	19.30	19.88	20.28	20.09	19.63	19.93
6	18.60	18.44	18.16	18.02	17.95	18.73	19.36	19.86	20.34	20.12	19.74	19.87
7	18.72	18.68	18.24	18.08	18.00	18.77	19.39	19.83	20.40	20.12	19.86	20.02
8	18.86	18.79	18.40	18.12	17.92	18.80	19.50	19.82	20.40	20.06	19.88	19.97
9	18.98	18.74	18.43	18.02	17.98	18.83	19.62	19.84	20.26	20.00	19.84	19.92
10	19.04	18.67	18.49	17.92	18.02	18.84	19.65	19.88	20.13	19.99	19.74	19.88
11	19.05	18.67	18.48	17.97	18.07	18.86	19.60	19.90	20.16	19.99	19.71	19.82
12	19.00	18.58	18.52	17.99	18.08	18.90	19.60	20.04	20.20	19.96	19.88	19.82
13	18.91	18.46	18.44	17.93	18.08	18.90	19.69	20.19	20.24	19.90	20.02	19.90
14	18.89	18.33	18.53	17.88	18.11	18.87	19.80	20.28	20.22	19.85	20.16	20.01
15	18.86	18.48	18.56	17.82	18.16	18.88	19.87	20.30	20.23	19.88	20.16	20.08
16	18.74	18.49	18.46	17.82	18.21	18.91	19.84	20.26	20.33	19.94	20.08	20.06
17	18.73	18.44	18.40	17.87	18.32	18.94	19.92	20.19	20.42	20.00	20.14	20.04
18	18.63	18.44	18.38	17.96	18.35	18.93	19.81	20.12	20.36	20.00	20.04	20.02
19	18.64	18.40	18.31	18.03	18.32	18.94	19.91	20.10	20.28	20.00	19.91	19.98
20	18.74	18.34	18.13	18.06	18.27	18.97	19.78	20.14	20.22	20.02	20.04	19.98
21	18.82	18.31	18.12	18.08	18.32	18.98	19.74	20.22	20.20	20.04	20.16	20.00
22	18.90	18.28	18.27	18.01	18.41	18.95	19.72	20.25	20.30	20.07	20.12	20.06
23	18.78	18.22	18.32	17.87	18.41	18.93	19.80	20.17	20.34	20.07	19.97	20.08
24	18.58	18.28	18.30	17.90	18.40	18.94	19.86	20.18	20.30	20.11	19.92	20.06
25	18.50	18.32	18.16	18.00	18.42	18.88	19.86	20.24	20.23	20.13	19.93	20.16
26	18.50	18.58	18.18	18.02	18.48	19.19	19.84	20.30	20.26	20.01	19.95	20.26
27	18.33	18.17	18.10	18.04	18.54	19.20	19.84	20.27	20.30	20.07	19.92	20.26
28	18.25	18.15	17.30	18.05	18.54	19.20	19.88	20.22	20.17	20.08	19.84	20.20
29	18.32	18.38	17.90	18.09	18.44	19.16	19.85	20.20	20.06	20.06	19.82	20.14
30	18.70	---	18.20	18.08	18.38	19.14	19.81	20.17	20.06	20.07	19.82	20.11
31	18.46	---	18.29	---	18.42	---	19.76	20.16	---	20.10	---	20.09
MEAN	18.70	18.43	18.32	18.01	18.20	18.88	19.66	20.08	20.26	20.04	19.93	20.02

CAL YR 1984 MEAN 19.21 HIGH 17.76 LOW 20.42

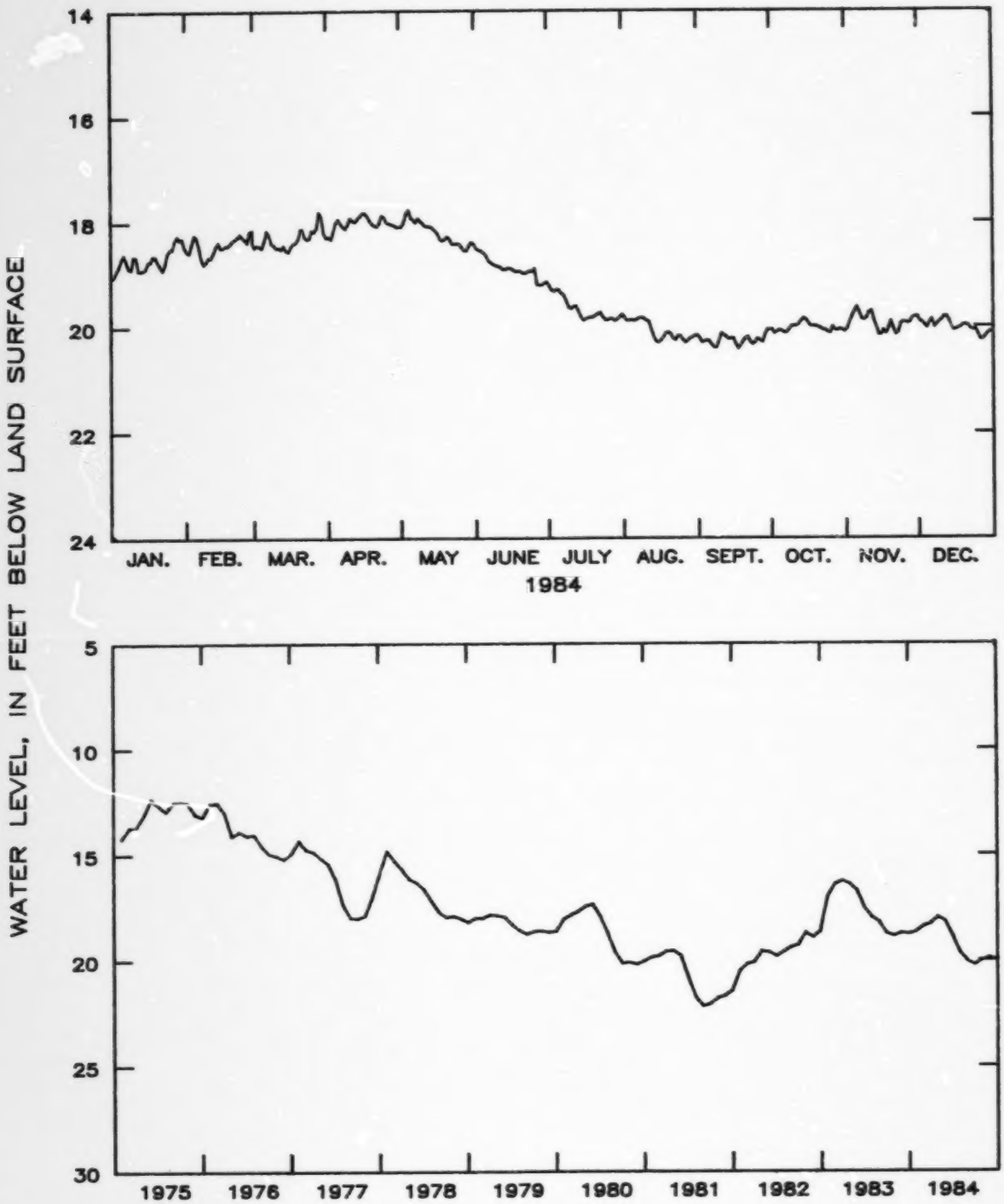

Figure 2.7.4.2–6.––Water level in observation well 34N089, Liberty County.

35MO13 HARRIS NECK MCINTOSH COUNTY

313826081152601 Local number, 35MO13.
LOCATION.--Lat 31°38'23", long 81°15'42", Hydrologic Unit 03060204, 8.5 mi east of U.S. Highway 17 at Harris Neck Wildlife Refugee.
Owner: U.S. Department of the Interior, Fish and Wildlife Service.
AQUIFER.--Floridan aquifer system.
WELL CHARACTERISTICS.--Drilled unused supply well, diameter 10 in., depth 553 ft, cased to 376 ft, open hole.
DATUM.--Altitude of land-surface datum is 16.3 ft.
Measuring point: Floor of recorder shelter, 3.2 ft above land-surface datum.
REMARKS.--Well pumped August 3, 1976; water-quality sample collected at conclusion of pumping. Borehole geophysical survey conducted June 16, 1976.
PERIOD OF RECORD.--September 1966 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 4.35 ft below land-surface datum, October 4, 1966; lowest, 20.45 ft below land-surface datum, December 19, 1981.

Water level, in feet below land surface, through calendar year 1984 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	17.54	17.25	17.38	16.70	16.68	16.70	17.29	17.61	18.06	18.10	18.16	18.19
2	17.46	17.26	17.26	16.68	16.58	16.74	17.33	17.78	18.10	18.16	18.09	18.14
3	17.40	17.09	17.20	16.56	16.46	16.76	17.33	17.88	18.08	18.16	17.96	18.16
4	17.35	16.94	17.15	16.49	16.49	16.72	17.34	17.90	18.08	18.22	17.74	18.22
5	17.28	17.06	17.02	16.52	16.56	16.83	17.38	17.85	18.10	18.24	17.82	17.98
6	16.97	17.30	16.92	16.71	16.61	16.92	17.38	17.79	17.96	18.22	18.02	17.98
7	17.33	17.44	17.05	16.71	16.72	17.01	17.39	17.74	17.98	18.12	18.01	18.32
8	17.46	17.44	17.11	16.65	16.68	17.08	17.41	17.74	17.93	18.04	18.06	18.25
9	17.52	17.42	17.26	16.64	16.68	17.05	17.34	17.76	17.78	18.00	18.00	18.20
10	17.15	17.36	17.19	16.34	16.69	17.00	17.42	17.72	17.87	17.99	17.92	18.15
11	17.26	17.30	17.12	16.33	16.68	17.04	17.44	17.71	17.96	17.98	17.96	18.09
12	17.33	17.18	17.09	16.36	16.64	17.06	17.46	17.83	18.14	18.01	18.00	18.00
13	17.32	16.94	17.01	16.32	16.66	17.02	17.62	17.92	18.24	17.98	18.07	18.06
14	17.28	16.88	17.10	16.26	16.60	17.06	17.64	18.00	18.23	17.90	18.17	18.24
15	17.20	17.00	17.17	16.22	16.54	17.15	17.66	18.02	18.23	17.89	18.14	18.22
16	17.06	17.00	17.06	16.33	16.64	17.17	17.68	18.01	18.14	17.94	18.18	18.22
17	17.04	16.99	16.91	16.48	16.70	17.18	17.66	17.94	18.07	18.06	18.14	18.20
18	16.98	17.02	16.84	16.56	16.68	17.20	17.76	17.84	18.04	18.10	18.00	18.14
19	17.09	17.04	16.84	16.56	16.74	17.26	17.85	17.84	18.00	18.12	18.04	18.10
20	17.15	16.73	16.70	16.65	16.85	17.25	17.76	17.87	17.96	18.09	18.10	18.06
21	17.12	16.73	16.72	16.45	16.86	17.11	17.69	17.90	18.00	18.10	18.01	18.12
22	17.32	16.88	17.01	16.60	16.84	17.04	17.60	17.87	18.12	18.10	17.94	18.10
23	17.26	16.86	17.15	16.46	16.87	17.02	17.72	17.86	18.10	18.09	17.82	18.20
24	17.16	17.20	17.02	16.68	16.80	17.05	17.71	17.96	18.10	18.09	17.97	18.14
25	17.16	17.21	16.86	16.71	16.76	17.05	17.68	17.84	18.07	18.09	18.04	18.32
26	17.21	17.16	16.94	16.78	16.87	17.05	17.60	17.80	18.08	17.98	18.16	18.40
27	17.00	16.96	16.64	16.71	16.87	17.12	17.66	17.80	18.04	18.04	18.18	18.44
28	17.06	17.12	16.86	16.73	16.88	17.16	17.60	17.82	17.78	18.10	18.02	18.42
29	17.08	17.39	16.74	16.70	16.82	17.15	17.60	17.93	18.00	18.20	18.06	18.43
30	17.10	---	16.76	16.68	16.72	17.21	17.48	17.98	17.98	18.19	18.06	18.46
31	17.03	---	16.70	---	16.71	---	17.50	18.08	---	18.20	---	18.44
MEAN	17.21	17.10	16.98	16.55	16.71	17.04	17.55	17.86	18.04	18.08	18.02	18.21

CAL YR 1984 MEAN 17.45 HIGH 16.22 LOW 18.46

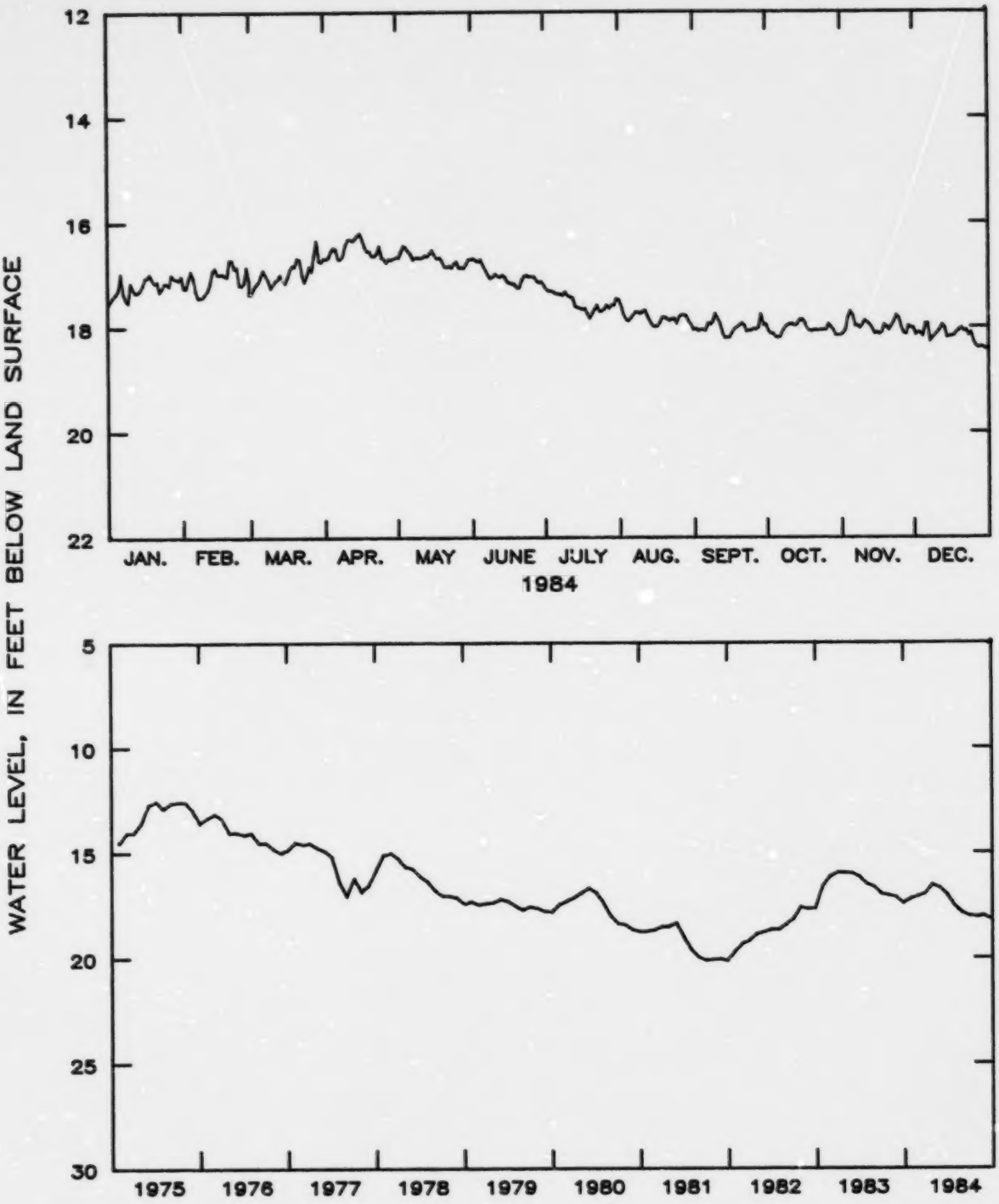

Figure 2.7.4.2–7.––Water level in observation well 35M013, McIntosh County.

2.7.4.3 Brunswick area

Water levels in the Floridan aquifer system in the Brunswick area are affected by ground-water pumpage of about 80 Mgal/d for municipal and industrial use. Partial industrial shutdowns during 1982, the installation of an evaporative cooling tower by a major water user in July 1982, and other water conservation measures reduced industrial pumpage by about 20 Mgal/d and allowed ground-water levels to recover significantly from the record lows of 1981. Mean annual water levels changed little from 1982 to 1984. In 1984, partial industrial shutdowns during May and October are reflected by sharp water-level rises, whereas a temporary increase in water use during August is reflected by a gradual decline.

Mean annual water levels in water-bearing zones of the Upper Floridan aquifer in the Brunswick area ranged from 0.2 foot lower to 0.5 foot higher in 1984 than in 1983. Levels in the brackish-water zone of the Lower Floridan aquifer were about the same as in 1983 to 0.4 foot higher. At well 34H391 tapping the brackish-water zone, a record high was recorded in January 1984.

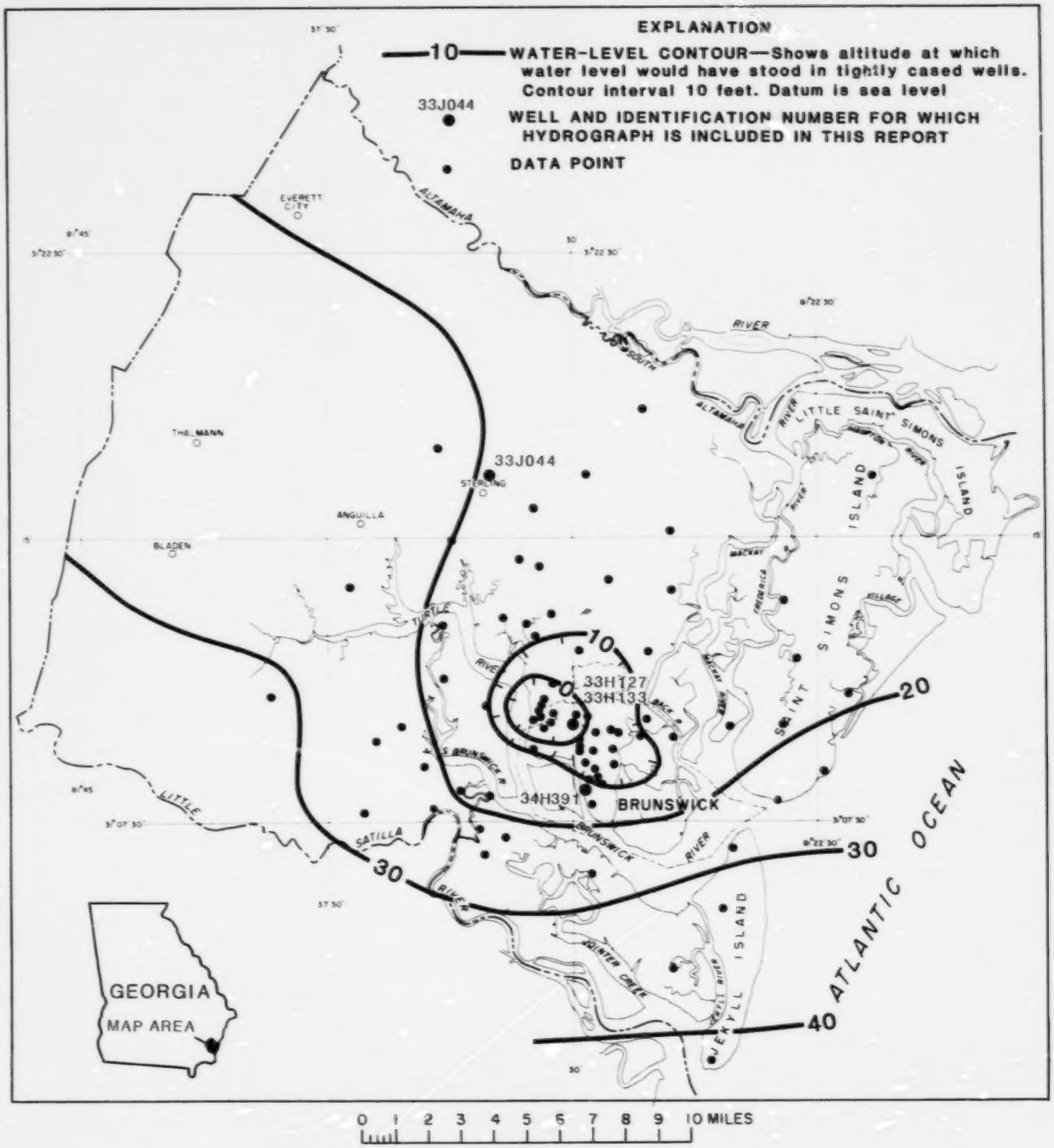

Figure 2.7.4.3-1.—Observation well locations and the water level in the Floridan aquifer system in the Brunswick area, October-November 1984.

33H127 TEST WELL 3 GLYNN COUNTY

311007081301701 Local number, 33H127.
LOCATION.--Lat 31°10'07", long 81°30'17", Hydrologic Unit 03070203, in south corner of Greenwood Cemetery in Brunswick.
Owner: U.S. Geological Survey, test well 3.
AQUIFER.--Floridan aquifer system.
WELL CHARACTERISTICS.--Drilled unused observation well, diameter 4 in., depth 1,002 ft, cased to 823 ft, open hole.
DATUM.--Altitude of land-surface datum is 6 ft.
Measuring point: Floor of recorder shelter, 8.00 ft above land-surface datum.
REMARKS.--Well was flowing January 12-15 and December 27-31.
PERIOD OF RECORD.--August 1962 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 14.00 ft above land-surface datum, October 9, 1962; lowest, 11.19 ft below land-surface datum, July 14, 1977.

Water level, in feet above or below land surface, through calendar year 1984 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	1.26	.05	.95	1.61	.02	-0.95	-0.01	-2.54	-2.65	-0.61	.59	1.60
2	2.42	-0.03	1.04	1.74	-0.30	-0.95	.24	-2.35	-2.83	2.35	1.59	1.07
3	2.57	.47	.99	1.94	-1.29	-0.99	.24	-2.97	-2.78	2.58	1.62	1.05
4	1.55	.96	.70	1.64	-0.76	-1.12	-0.10	-2.92	-2.23	1.54	1.51	1.80
5	2.07	2.19	1.42	1.28	-0.44	-1.29	.29	-2.50	-2.97	.23	1.25	1.11
6	2.76	.04	1.07	1.45	-0.44	-1.53	.67	-2.37	-2.69	.00	1.87	1.36
7	2.57	.46	1.78	2.10	.40	-1.56	.47	-2.67	-2.12	-0.22	.57	1.10
8	1.77	.28	1.59	2.55	3.41	-0.69	.18	-2.56	-1.93	.32	-0.65	1.38
9	1.43	.94	1.13	2.17	4.57	-1.58	.37	-2.31	-1.24	.73	-0.50	.62
10	1.58	1.00	.55	2.13	3.94	-1.61	.89	-2.19	-0.73	-0.19	-0.24	.74
11	2.24	.01	.79	2.07	1.92	-1.68	.83	-2.18	-0.67	.45	2.18	.71
12	---	.35	.60	1.32	.90	-1.72	-0.38	-2.35	-0.91	-0.39	.73	.07
13	---	.95	1.47	1.32	.68	-1.73	-0.19	-2.04	-0.91	-0.11	.99	-0.02
14	---	1.09	.96	1.07	.36	-1.69	-0.52	-2.13	-1.04	-0.34	-0.30	.78
15	---	1.11	1.00	2.54	.06	-1.54	-0.49	-2.61	-0.91	-0.17	-0.11	.17
16	2.96	1.17	.51	1.63	.02	-1.56	-0.50	-2.61	-0.64	-0.09	.88	.13
17	3.15	1.07	.04	1.59	.09	-1.09	-0.72	-3.06	-0.99	-0.72	1.24	.20
18	3.15	.55	.87	.62	.92	-0.94	-0.91	-3.08	-0.72	-0.47	2.02	.28
19	3.07	.47	.62	.43	-0.17	-0.79	-1.05	-2.53	-0.35	-0.52	2.19	.34
20	2.16	.33	.96	.29	-0.57	-1.60	-0.74	-2.36	-0.55	-0.18	2.49	.53
21	1.26	1.03	.69	.46	.31	-1.09	-0.45	-2.42	-0.31	-0.19	2.21	.59
22	.95	1.40	.84	.47	-0.32	-1.39	-0.25	-2.67	-0.74	1.22	2.10	.49
23	1.41	1.54	.74	.81	.02	-0.66	-0.04	-3.26	-0.68	.33	2.15	1.02
24	2.29	1.33	.67	.49	-1.25	-1.15	-0.05	-2.65	.02	.07	1.56	3.25
25	2.12	1.11	.49	.55	-1.30	-0.99	-0.83	-2.83	.53	.23	1.53	4.34
26	1.51	1.09	1.13	1.07	-1.10	-0.50	-1.09	-2.68	-0.06	.08	.77	4.36
27	1.12	1.53	2.02	1.07	-1.32	-1.16	-1.73	-2.44	-0.86	-0.16	1.34	---
28	.58	2.05	1.81	.49	-1.34	-1.35	-2.11	-2.51	-0.89	-0.10	1.82	---
29	.22	1.16	1.76	-0.16	-1.17	-1.13	-2.09	-2.44	-0.91	.05	2.21	---
30	-0.01	---	2.09	-0.06	-0.69	-0.64	-1.81	-2.63	-1.11	.20	2.70	---
31	.16	---	1.58	---	-0.57	---	-1.87	-2.95	---	.05	---	---
MEAN	1.97	.93	1.09	1.26	.19	-1.22	-0.45	-2.59	-1.15	.22	1.28	1.10

CAL YR 1984 MEAN .29 MAX 4.57 MIN -3.26

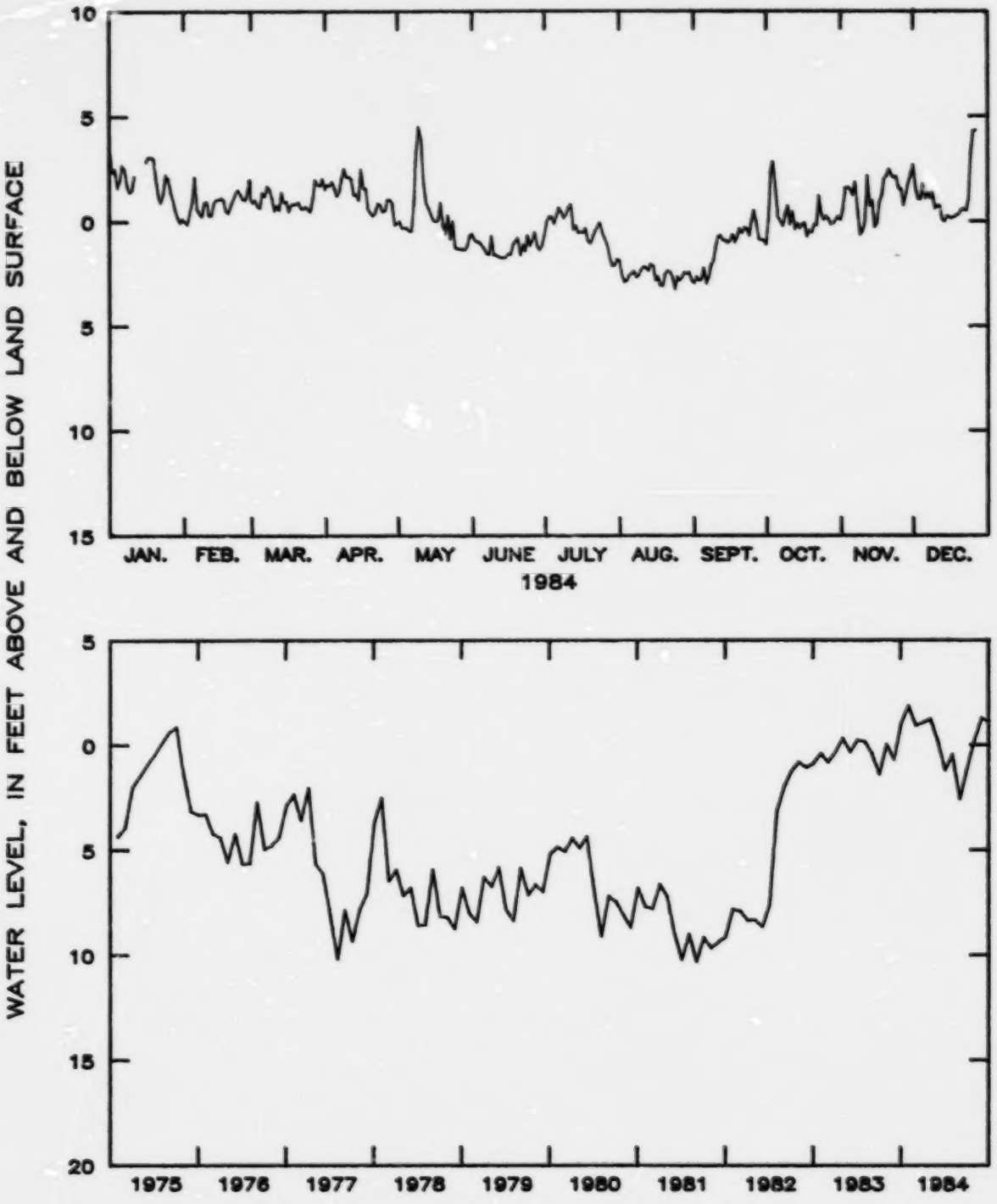

Figure 2.7.4.3–2.––Water level in observation well 33H127, lower water–bearing zone, Glynn County.

33H133 TEST WELL 6 GLYNN COUNTY

311007081301702 Local number, 33H133.
LOCATION.--Lat 31°10'07", long 81°30'17", Hydrologic Unit 03070203, in south corner of Greenwood Cemetery in Brunswick.
Owner: U.S. Geological Survey, test well 6.
AQUIFER.--Floridan aquifer system.
WELL CHARACTERISTICS.--Drilled observation well, diameter 4 in., depth 790 ft, cased to 520 ft, open hole.
DATUM.--Altitude of land-surface datum is 7 ft.
Measuring point: Floor of recorder shelter, 5.1 ft above land-surface datum.
REMARKS.--Well pumped monthly; water-quality samples collected at conclusion of pumping. Borehole geophysical survey conducted September 26, 1977. Water levels for periods of missing recorder record, January 3-8, 12, January 16 to February 15, May 23 to June 18, September 28 to October 6, and December 2-3, were estimated. Well was flowing January 1-2, and December 25-31.
PERIOD OF RECORD.--January 1963 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 9.07 ft above land-surface datum, December 26, 1965; lowest, 21.87 ft below land-surface datum, July 22, 1977.

Water level, in feet below land surface, through calendar year 1984 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	2.00	-5.99	-7.32	-7.07	-8.28	-9.28	-7.84	-11.65	-11.74	-7.19	-7.42	-4.86
2	.25	-6.26	-7.20	-6.94	-8.72	-9.34	-7.40	-11.89	-11.64	-5.35	-6.56	-5.06
3	-0.49	-5.84	-7.40	-6.47	-8.95	-9.34	-7.78	-12.06	-11.51	-4.44	-6.67	-5.27
4	-2.31	-5.49	-7.49	-6.26	-8.97	-9.43	-8.15	-11.40	-10.93	-4.61	-7.02	-5.47
5	-2.83	-4.40	-6.93	-6.50	-9.00	-9.57	-7.90	-11.16	-11.66	-6.45	-7.64	-6.26
6	-3.03	-6.08	-6.16	-7.10	-9.08	-9.77	-7.44	-11.18	-11.39	-7.15	-6.89	-6.20
7	-4.15	-6.39	-6.30	-7.02	-6.19	-9.76	-7.57	-11.74	-10.09	-7.94	-6.54	-6.85
8	-5.86	-6.71	-6.47	-6.07	-3.19	-8.54	-7.75	-11.47	-10.05	-6.92	-8.54	-6.93
9	-7.06	-6.18	-7.37	-6.34	-1.84	-9.71	-7.25	-11.05	-9.07	-7.94	-8.73	-6.97
10	-6.25	-6.26	-7.92	-6.23	-1.58	-9.70	-7.84	-10.92	-8.65	-7.72	-8.12	-7.25
11	-5.99	-7.06	-7.97	-6.23	-4.96	-9.73	-7.63	-10.92	-8.51	-7.64	-6.37	-7.33
12	-4.15	-7.18	-8.00	-6.44	-7.51	-9.73	-7.60	-10.68	-8.90	-8.06	-7.60	-7.57
13	-2.70	-6.71	-7.10	-6.68	-7.85	-9.71	-7.80	-10.15	-9.22	-7.71	-7.83	-7.52
14	-1.49	-6.71	-7.55	-6.97	-7.09	-9.63	-8.30	-10.33	-8.98	-8.49	-7.65	-7.45
15	-0.54	-6.42	-7.40	-5.12	-7.52	-9.44	-8.33	-11.38	-9.05	-8.37	-7.38	-7.36
16	-0.92	-6.90	-7.89	-6.52	-8.48	-9.42	-8.75	-11.73	-9.02	-8.04	-6.39	-7.43
17	-0.96	-7.27	-7.68	-6.66	-8.76	-8.92	-8.10	-12.07	-8.89	-8.81	-5.61	-7.10
18	-1.00	-7.90	-7.32	-7.74	-7.93	-8.73	-9.22	-12.10	-8.59	-8.55	-4.72	-7.45
19	-1.21	-7.67	-7.81	-7.84	-7.84	-8.54	-9.35	-11.68	-8.43	-8.39	-5.35	-6.95
20	-2.26	-7.42	-7.52	-8.02	-8.80	-9.94	-8.65	-11.15	-8.31	-7.64	-5.19	-6.62
21	-3.29	-7.49	-7.66	-7.98	-8.97	-9.26	-8.34	-11.36	-8.56	-7.25	-5.62	-6.31
22	-3.71	-6.98	-7.99	-7.35	-9.62	-9.92	-8.00	-12.10	-8.19	-7.20	-5.97	-6.73
23	-3.41	-6.67	-8.09	-7.42	-8.74	-9.94	-8.38	-12.01	-8.15	-7.69	-5.15	-5.20
24	-2.67	-6.98	-7.96	-7.89	-9.98	-9.02	-8.59	-12.07	-7.49	-8.12	-5.99	-1.36
25	-2.96	-7.21	-8.02	-7.84	-9.99	-8.99	-8.83	-11.66	-7.40	-7.91	-5.67	---
26	-3.72	-7.07	-7.95	-7.45	-9.95	-9.01	-9.64	-11.31	-8.04	-8.05	-6.42	---
27	-4.24	-6.69	-6.99	-7.84	-9.93	-9.01	-10.73	-11.28	-8.53	-8.29	-6.36	---
28	-4.92	-6.30	-6.29	-7.82	-9.92	-9.61	-11.30	-11.13	-8.39	-8.15	-6.20	---
29	-5.41	-6.57	-6.61	-8.56	-9.71	-9.34	-11.08	-11.32	-8.62	-7.52	-5.30	---
30	-5.75	---	-6.54	-7.57	-9.19	-8.65	-10.65	-11.46	-8.82	-6.83	-4.72	---
31	-5.75	---	-6.79	---	-9.03	---	-11.09	-11.97	---	-7.45	---	---
MEAN	-3.13	-6.64	-7.14	-7.06	-7.98	-9.31	-8.62	-11.46	-9.23	-7.48	-6.52	-6.40

CAL YR 1984 MEAN -7.62 MAX 2.00 MIN -12.93

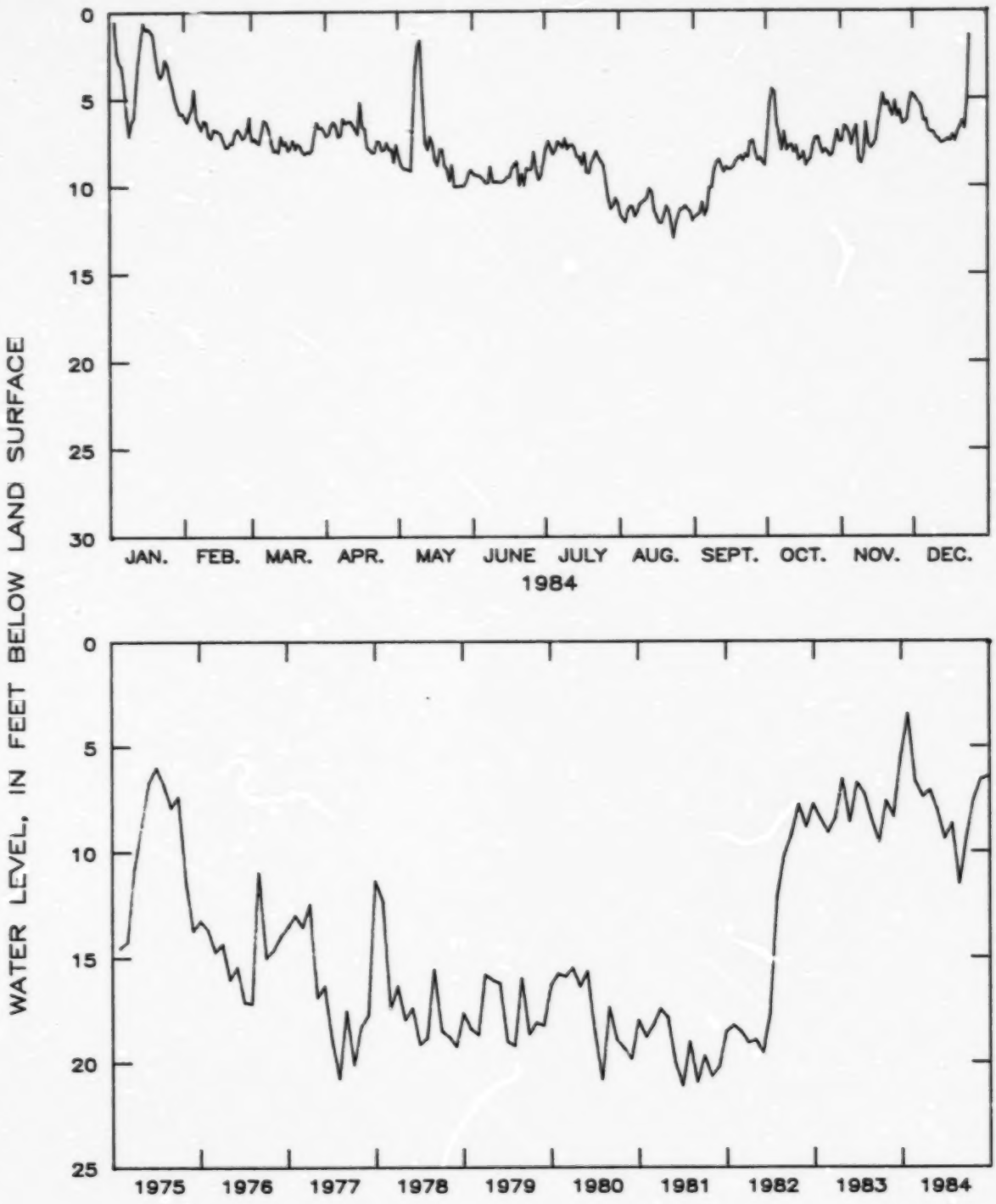

Figure 2.7.4.3–3.––Water level in observation well 33H133, upper water–bearing zone, Glynn County.

34H391 TEST WELL 16 GLYNN COUNTY

310818081294201 Local number, 34H391.
LOCATION.--Lat 31°08'18", long 81°29'42", Hydrologic Unit 03070203, located near intersection of Albemarle Street/Ocean Boulevard and Bay Street in Brunswick.
Owner: U.S. Geological Survey, test well 16.
AQUIFER.--Floridan aquifer system.
WELL CHARACTERISTICS.--Drilled unused observation well, diameter 6 in., depth 1,150 ft, cased to 1,070 ft, open hole.
DATUM.--Altitude of land-surface datum is 7.71 ft.
Measuring point: Floor of recorder shelter 12.5 ft above land-surface datum.
REMARKS.--Water levels for periods of missing recorder record, January 16-18, 26-30, February 13-14, 23-29, and May 8-10, were estimated. Well was flowing December 25-31.
PERIOD OF RECORD.--August 1975.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 11.34 ft above land-surface datum, January 15, 1984; lowest, 2.96 ft below land-surface datum, July 27, 1977.

Water level, in feet above or below land surface, through calendar year 1984 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	---	7.90	8.90	8.96	7.92	7.14	7.14	5.81	5.35	7.83	7.72	8.99
2	---	7.94	8.42	8.93	7.86	7.06	7.31	5.57	5.76	8.57	8.09	8.81
3	---	8.34	8.50	9.01	7.84	7.02	7.38	5.52	5.46	9.20	8.38	8.69
4	---	9.44	8.41	9.20	7.82	6.87	7.37	5.58	5.52	9.28	8.39	8.88
5	---	8.59	8.56	9.12	7.72	6.70	7.43	5.69	5.46	8.81	8.27	8.78
6	---	8.24	8.95	8.96	7.62	6.52	7.57	5.68	5.51	8.39	7.91	8.47
7	---	8.05	8.91	8.77	7.75	6.51	7.67	5.61	5.92	8.07	8.10	8.39
8	---	8.04	8.80	9.02	8.12	6.64	7.62	5.57	6.17	8.22	7.66	8.38
9	---	8.24	8.61	9.41	8.48	6.56	7.68	5.59	6.53	8.20	7.43	8.34
10	9.20	8.35	8.48	9.37	8.34	6.48	7.55	5.57	6.88	8.04	7.59	8.32
11	9.18	8.29	8.47	9.42	8.20	6.41	7.47	5.77	7.00	8.01	8.06	8.19
12	9.97	8.32	8.46	9.24	8.73	6.37	7.43	5.70	6.95	7.84	8.01	8.12
13	10.64	8.34	8.64	9.07	8.40	6.36	7.24	5.73	6.79	7.94	7.76	8.20
14	11.24	8.36	8.52	8.95	8.20	6.35	7.19	5.66	6.85	7.92	7.48	8.24
15	11.34	8.38	8.41	9.19	8.05	6.43	7.12	5.50	6.92	7.88	7.64	8.21
16	10.92	8.54	8.42	9.12	7.72	6.50	7.05	5.35	6.92	7.78	7.93	8.31
17	10.50	8.57	8.48	9.03	7.59	6.54	7.01	5.29	7.03	7.53	8.32	---
18	10.72	8.38	8.62	8.48	7.55	6.67	6.94	5.30	7.04	7.49	8.68	---
19	9.65	8.10	8.56	8.25	7.57	6.66	6.69	5.36	7.23	7.62	8.96	---
20	9.33	8.37	8.65	8.15	7.41	6.53	6.83	5.54	7.34	7.84	8.87	---
21	8.89	8.44	8.48	8.20	7.37	6.33	7.11	5.47	7.70	7.87	8.89	---
22	8.69	8.62	8.27	8.36	7.13	6.59	7.27	5.47	7.29	8.12	8.87	---
23	8.81	8.60	8.26	8.48	7.03	6.79	7.33	5.27	7.33	8.07	9.07	---
24	9.26	8.59	8.40	8.25	7.01	6.93	7.02	5.28	7.46	7.96	9.02	---
25	9.16	8.58	8.41	8.17	6.89	6.84	6.96	5.53	7.69	7.90	8.94	---
26	9.06	8.56	8.38	8.24	6.82	7.04	6.78	5.57	7.79	7.94	8.78	---
27	8.76	8.59	8.45	8.18	6.83	6.92	6.32	5.60	7.58	7.87	8.52	---
28	8.55	8.53	8.35	8.17	6.81	6.74	6.06	5.72	7.63	7.87	8.79	---
29	8.35	8.52	8.01	7.98	6.89	6.73	6.01	5.61	7.45	7.92	8.86	---
30	8.15	---	7.92	7.92	7.02	6.93	6.12	5.55	7.52	8.07	8.93	---
31	7.95	---	8.04	---	7.20	---	6.08	5.35	---	7.84	---	---
MEAN	9.52	8.31	8.40	8.71	7.57	6.68	7.06	5.54	6.78	8.06	8.33	8.46

CAL YR 1984 MEAN 7.67 MAX 11.34 MIN 5.27

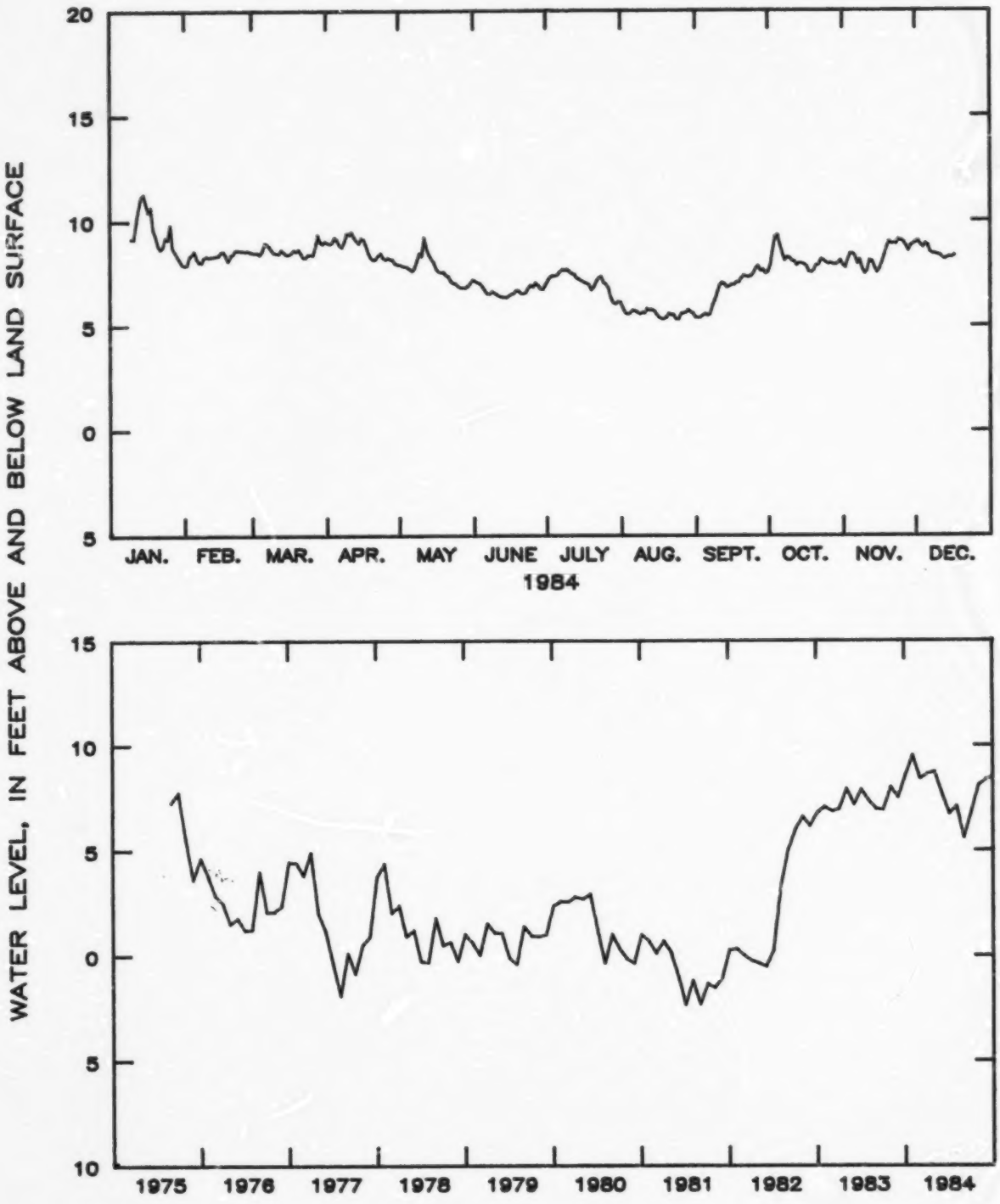

Figure 2.7.4.3–4.––Water level in observation well 34H391, brackish-water zone, Glynn County.

33J044 TEST WELL 27 GLYNN COUNTY

311633081324001 Local number, 33J044.
LOCATION.--Lat 31°16'33", long 81°32'40", Hydrologic Unit 03070203, 1.2 mi east of Sterling, off State Highway 99 at the Brunswick Pulp and Paper Company, Sterling Wood Products Division.
Owner: Brunswick Pulp and Paper Co., USGS test well 27.
AQUIFER.--Floridan aquifer system.
WELL CHARACTERISTICS.--Drilled unused observation well, diameter 9 in., depth 2,260 ft, cased to 1,079 ft, open hole.
DATUM.--Altitude of land-surface datum is 20 ft.
Measuring point: Floor of recorder shelter, 4.5 ft above land-surface datum.
REMARKS.--This is the Sterling oil-test well. Water level for period of missing recorder record, April 3-4, was estimated. Well was flowing January 1-4, 14-19, April 10-17, May 10-12, and December 25-31.
PERIOD OF RECORD.--May 1979 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 3.08 ft above land-surface datum, December 24, 1983; lowest, 6.30 ft below land-surface datum, August 11, 1981.

Water level, in feet above or below land surface, through calendar year 1984 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	---	1.91	2.21	2.69	2.36	1.53	1.07	.30	-0.36	1.06	1.27	2.16
2	---	1.90	2.22	2.69	2.42	1.50	1.15	.10	-0.41	1.31	1.30	2.12
3	---	2.11	2.19	2.80	2.30	1.51	1.23	-0.09	-0.32	1.69	1.72	2.03
4	---	2.36	2.20	2.92	2.46	1.44	1.27	-0.04	-0.29	1.94	1.85	1.94
5	3.03	2.35	2.32	3.03	2.26	1.26	1.37	-0.02	-0.30	1.85	1.82	2.09
6	2.97	2.10	2.32	2.89	2.21	1.13	1.36	-0.01	-0.37	1.67	1.61	2.03
7	2.76	1.92	2.53	2.77	2.26	1.02	1.44	.00	-0.31	1.53	1.55	1.81
8	2.57	1.85	2.38	2.81	2.65	1.02	1.43	-0.06	-0.11	1.55	1.44	1.81
9	2.46	1.95	2.34	3.04	3.01	1.02	1.43	-0.08	.20	1.56	1.33	1.82
10	2.60	2.04	2.20	---	---	.96	1.43	-0.10	.43	1.48	1.40	1.84
11	2.42	2.06	2.22	---	---	.84	1.44	-0.02	.52	1.43	1.57	1.88
12	2.40	2.16	2.18	---	---	.76	1.39	-0.08	.56	1.37	1.58	1.79
13	2.80	2.29	2.24	---	2.83	.82	1.25	-0.11	.53	1.42	1.41	1.67
14	---	2.33	2.17	---	2.71	.76	1.14	-0.12	.58	1.46	1.23	1.51
15	---	2.29	2.14	---	2.53	.79	1.10	-0.14	.71	1.38	1.24	1.50
16	---	2.27	2.22	---	2.40	.74	1.10	-0.24	.63	1.24	1.41	1.57
17	---	2.27	2.25	---	2.20	.85	1.07	-0.24	.64	1.11	1.55	1.59
18	---	2.23	2.33	3.00	2.09	.90	1.00	-0.27	.67	1.04	1.78	---
19	---	2.20	2.42	2.79	2.10	.90	.87	-0.27	.87	1.05	1.98	---
20	3.06	2.26	2.53	2.67	2.08	.91	.84	-0.24	.99	1.10	1.93	---
21	2.83	2.24	2.53	2.60	1.97	.89	.95	-0.36	.96	1.14	1.92	---
22	2.57	2.31	2.51	2.67	1.79	.90	1.03	-0.30	.87	1.19	1.97	---
23	2.62	2.40	2.23	2.83	1.70	.95	1.04	-0.32	.92	1.24	2.15	---
24	2.79	2.33	2.30	2.69	1.63	1.05	.93	-0.42	1.01	1.23	2.18	---
25	2.84	2.28	2.46	2.54	1.54	1.07	.88	-0.37	1.14	1.18	2.13	---
26	2.78	2.24	2.49	2.53	1.43	1.09	.85	-0.34	1.21	1.23	2.04	---
27	2.79	2.49	2.53	2.49	1.40	1.08	.70	-0.27	1.14	1.22	1.97	---
28	2.62	2.50	2.92	2.48	1.37	1.01	.52	-0.25	1.25	1.20	2.13	---
29	2.41	2.34	2.83	2.39	1.44	1.05	.39	-0.20	1.15	1.24	2.15	---
30	2.27	---	2.64	2.39	1.48	1.08	.45	-0.22	1.09	1.25	2.19	---
31	2.04	---	2.67	---	1.53	---	.43	-0.25	---	1.29	---	---
MEAN	2.65	2.21	2.37	2.71	2.08	1.03	1.05	-0.16	.52	1.34	1.73	1.83

CAL YR 1984 MEAN 1.54 MAX 3.06 MIN -0.42

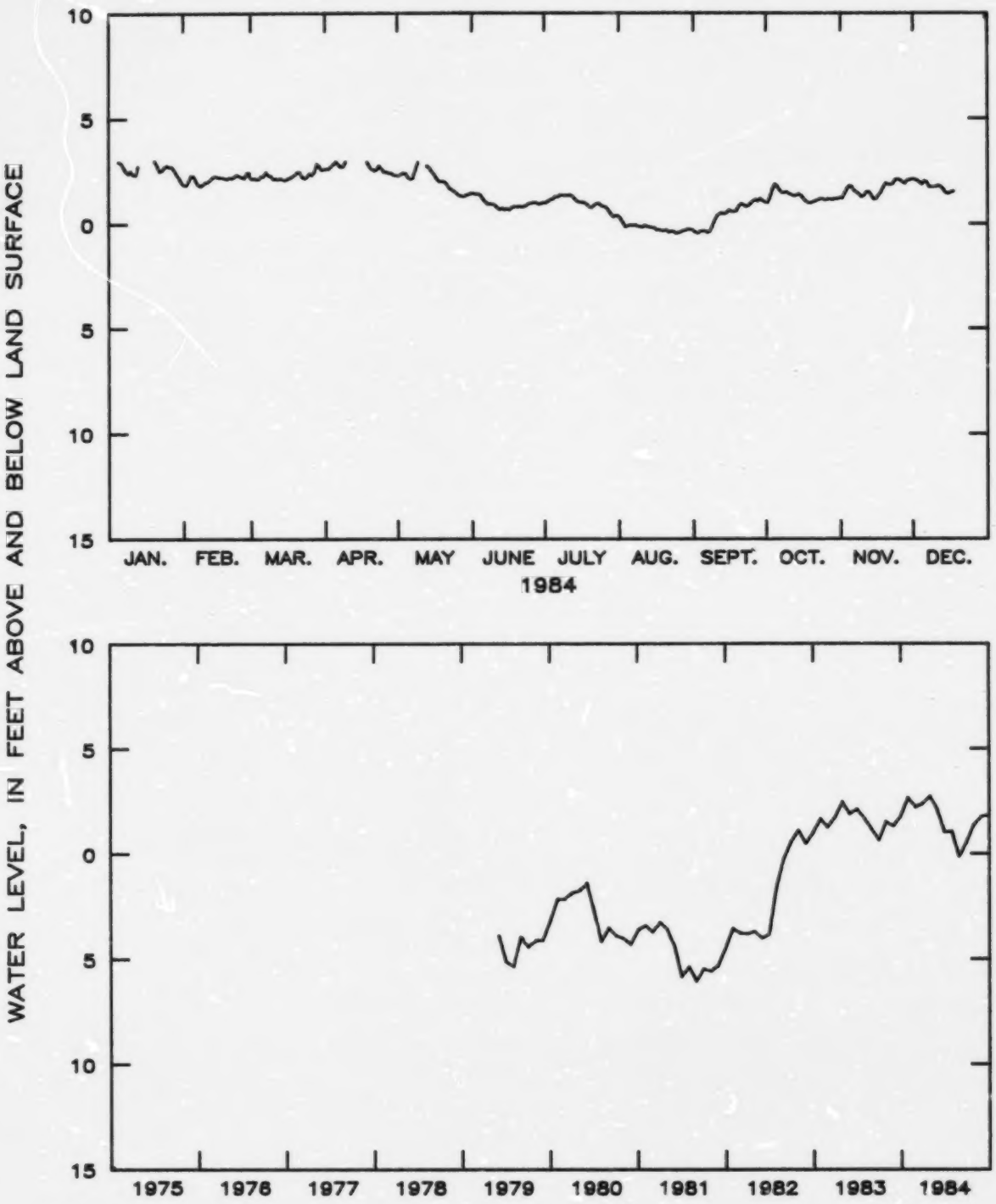

Figure 2.7.4.3–5.––Water level in observation well 33J044, brackish-water zone, Glynn County.

2.7.4.4 Kings Bay-Okefenokee Swamp area

Ground-water levels in the Floridan aquifer system in the Kings Bay area are affected by industrial pumpage of about 31 Mgal/d near St Marys and about 57 Mgal/d at Fernandina Beach, Fla. Water-level data collected during October-November 1984 have provided better resolution of the cone of depression in the St Marys-Fernandina Beach area. The cessation of the 1980-81 drought and a reduction in industrial pumping during 1982 allowed water levels to recover from the record lows of 1981. Water levels remained nearly unchanged in 1983 and showed a slight decline in 1984. Although the mean annual water level at well 33E027 near Kings Bay was 0.7 foot lower in 1984 than in 1983, a record high was reached in March 1984.

The water table in the Okefenokee Swamp area fluctuates seasonally in response to precipitation and evapotranspiration. This fluctuation probably affects the water level in the underlying Floridan aquifer system (Callahan, 1964). The mean annual water level at well 27E002 in western Charlton County was 0.4 foot higher in 1984 than in 1983.

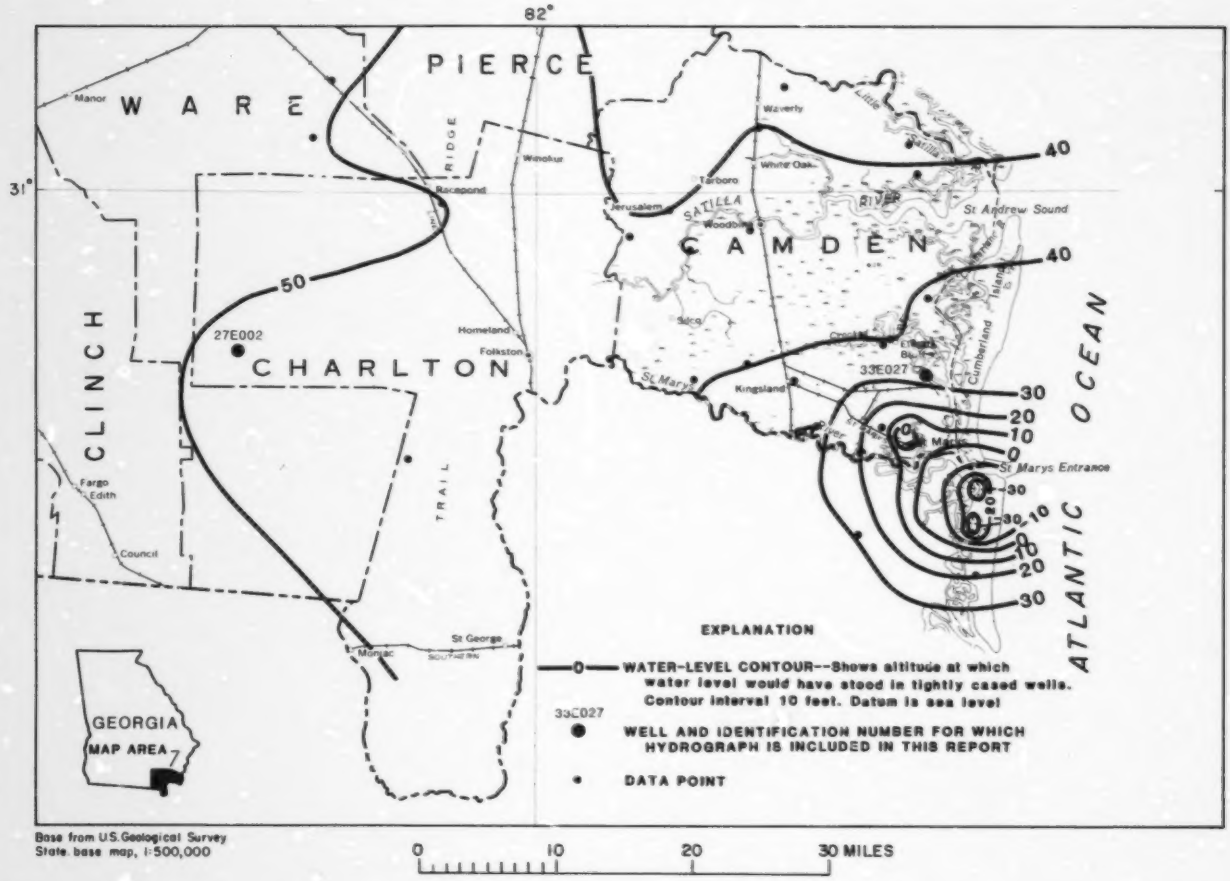

Figure 2.7.4.4-1.—Observation well locations and the water level in the Floridan aquifer system in the Kings Bay-Okefenokee Swamp area, October-November 1984.

[redacted] KINGS BAY CAMDEN COUNTY

304756081311101 Local number, 33E027.
LOCATION.--Lat 30°47'56", long 81°31'11", Hydrologic Unit 03070203, Kings Bay Army Terminal.
Owner: U.S. Department of the Navy.
AQUIFER.--Floridan aquifer system.
WELL CHARACTERISTICS.--Drilled unused test well, diameter 8 in., depth 1,306 ft, cased to 535 ft, backfilled to 990 ft.
DATUM.--Altitude of land-surface datum is 13.1 ft.
Measuring point: Top of flange at land-surface datum.
REMARKS.--Water levels for periods of missing recorder record, January 1-8, February 2-13, May 2 to June 19, and September 29 to October 1, were estimated.
PERIOD OF RECORD.--August 1979 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 24.71 ft above land-surface datum, March 28, 1984, and March 17, 1983; lowest, 14.75 ft above land-surface datum, February 28, 1981.

Water level, in feet above land surface, through calendar year 1984 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	23.20	22.82	23.26	23.97	24.20	22.20	21.10	19.90	20.10	20.43	20.60	20.10
2	23.32	22.93	23.00	24.02	24.26	22.14	21.00	19.70	20.10	20.56	20.70	20.10
3	23.45	23.01	23.15	24.20	24.36	22.11	21.00	19.80	20.10	20.59	20.60	20.10
4	23.57	23.21	23.64	24.34	24.33	22.04	21.20	19.70	19.90	20.60	20.80	19.90
5	23.70	23.19	24.09	24.36	24.17	21.91	21.20	19.90	20.10	20.57	20.70	20.10
6	23.82	23.01	24.29	24.13	24.09	21.76	21.10	19.70	20.30	20.54	20.40	20.20
7	24.00	22.81	23.66	24.21	24.00	21.67	21.20	19.80	20.20	20.54	20.20	19.80
8	24.08	22.71	23.50	24.34	24.02	21.61	21.30	19.90	20.20	20.61	20.20	19.60
9	24.20	22.77	23.80	24.55	23.91	21.53	21.50	19.70	20.50	20.65	20.40	19.90
10	24.50	22.83	23.97	24.35	23.80	21.46	21.40	19.60	20.50	20.65	20.40	20.10
11	24.23	22.98	24.05	24.46	23.70	21.38	21.30	19.70	20.30	20.65	20.50	20.30
12	23.64	22.95	24.20	24.37	23.65	21.31	21.30	19.90	20.10	20.66	20.40	20.40
13	23.62	23.12	24.41	24.55	23.60	21.24	21.20	19.60	20.00	20.74	20.10	20.40
14	23.52	23.15	24.30	24.60	23.59	21.23	21.20	19.60	19.90	20.83	20.10	20.20
15	23.47	23.07	24.16	24.60	23.50	21.12	21.20	19.60	20.00	20.77	20.00	20.20
16	23.60	23.07	24.37	24.50	23.38	21.03	21.20	19.60	20.00	20.71	20.10	20.30
17	23.64	23.23	24.45	24.40	23.23	20.95	21.00	19.80	20.00	20.64	20.10	20.20
18	23.59	23.25	24.50	24.30	23.11	20.94	20.70	20.00	20.20	20.66	20.30	20.30
19	23.51	23.32	24.65	24.05	23.11	20.90	20.40	20.10	20.10	20.66	20.30	20.30
20	23.13	23.51	24.65	24.10	23.10	20.70	20.20	20.20	20.10	20.64	20.10	20.40
21	23.25	23.56	24.41	24.40	23.03	20.60	20.30	19.80	20.10	20.66	20.10	20.50
22	23.10	23.55	24.34	24.55	22.87	19.70	20.40	19.80	20.10	20.60	20.20	20.50
23	23.24	23.65	24.36	24.40	22.81	20.50	20.60	20.10	20.10	20.59	20.40	20.50
24	23.46	23.55	24.45	24.35	22.77	20.50	20.30	20.10	20.30	20.57	20.40	20.60
25	23.41	23.53	24.62	24.40	22.70	20.50	20.00	20.10	20.40	20.56	20.30	20.80
26	22.75	23.54	24.44	24.40	22.58	20.20	19.70	20.10	20.30	20.57	20.30	21.40
27	23.36	23.80	24.33	24.45	22.49	20.20	19.50	19.80	20.50	20.53	20.20	22.00
28	23.31	23.43	24.71	24.35	22.41	21.20	19.90	20.00	20.80	20.65	20.20	22.80
29	23.24	23.10	24.22	24.35	22.42	21.20	19.70	20.10	20.81	20.69	20.00	22.90
30	23.28	---	24.35	24.35	22.41	21.00	20.00	20.10	20.76	20.69	20.10	22.70
31	22.93	---	24.00	---	22.36	---	20.20	20.10	---	20.64	---	22.60
MEAN	23.51	23.19	24.13	24.35	23.35	21.16	20.72	19.87	20.17	20.63	20.31	20.65

CAL YR 1984 MEAN 21.85 MAX 24.71 MIN 19.50

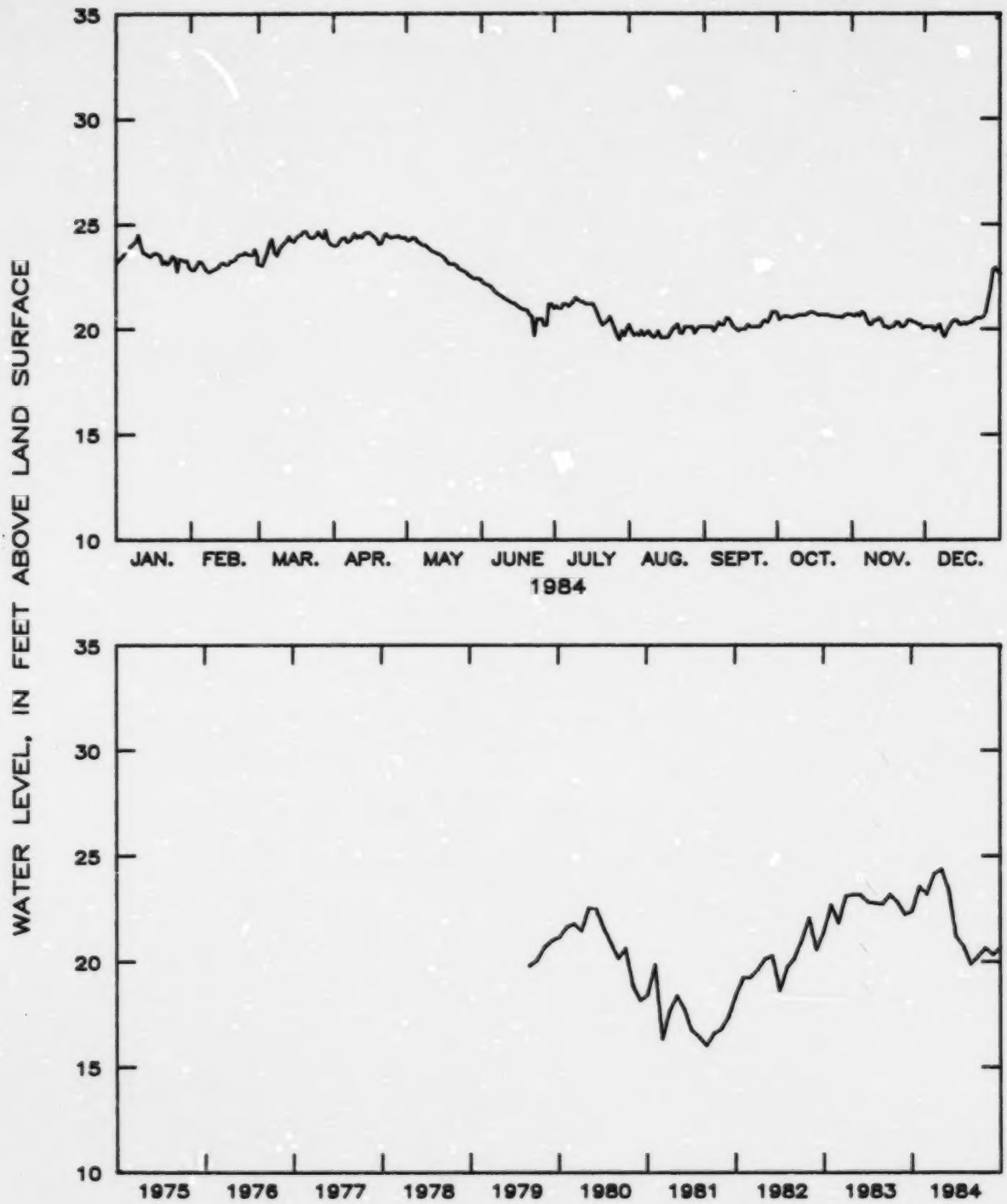

Figure 2.7.4.4–2.––Water level in observation well 33E027, Camden County.

27E002 TEST WELL OK8 CHARLTON COUNTY

304943082213701 Local number, 27E002.
LOCATION.--Lat 30°49'43", long 82°21'37", Hydrologic Unit 03110201, end of Georgia Highway 177 east of Stephen C. Foster State Park.
Owner: U.S. Geological Survey, test well OK 8.
AQUIFER.--Floridan aquifer system.
WELL CHARACTERISTICS.--Drilled observation well, diameter 4 in., depth 647 ft, cased to 465 ft, open hole.
DATUM.--Altitude of land-surface datum is 116 ft.
Measuring point: Floor of recorder shelter, 4.2 ft above land-surface datum.
REMARKS.--Well pumped August 1, 1978, sounded to obstruction at 484 ft. Well open below obstruction. Water levels for periods of missing recorder record, January 1, April 19 to May 8, September 14-18, and October 2-8, were estimated.
PERIOD OF RECORD.--May 1966 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 58.65 ft below land-surface datum, June 27, 1966; lowest, 71.17 ft below land-surface datum, July 27, 1981.

Water level, in feet below land surface, through calendar year 1984 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	65.96	64.84	64.09	62.42	61.51	63.19	65.00	65.39	65.66	65.94	66.34	66.37
2	65.87	64.82	64.09	62.39	61.45	63.25	65.11	65.41	65.70	65.95	66.27	66.44
3	65.81	64.66	64.09	62.27	61.33	63.26	65.13	65.43	65.69	65.96	66.16	66.46
4	65.66	64.46	64.09	62.04	61.42	63.30	65.10	65.41	65.67	65.98	66.12	66.53
5	65.49	64.43	63.97	61.91	61.50	63.41	65.12	65.40	65.71	65.99	66.14	66.43
6	65.35	64.58	63.73	61.96	61.57	63.54	65.13	65.39	65.77	66.00	66.26	66.42
7	65.35	64.76	63.69	62.00	61.65	63.62	65.15	65.35	65.79	66.01	66.40	66.62
8	65.43	64.82	63.82	61.96	61.62	63.69	65.18	65.30	65.79	66.03	66.47	66.62
9	65.38	64.79	63.83	61.82	61.72	63.75	65.25	65.30	65.76	66.04	66.41	66.57
10	65.15	64.70	63.83	61.70	61.78	63.82	65.31	65.28	65.71	66.05	66.32	66.52
11	65.08	64.63	63.81	61.70	61.86	63.89	65.27	65.27	65.70	66.09	66.24	66.46
12	65.27	64.53	63.76	61.67	61.94	63.96	65.27	65.32	65.78	66.09	66.33	66.45
13	65.31	64.40	63.69	61.60	61.99	64.04	65.34	65.35	65.79	66.04	66.43	66.50
14	65.37	64.75	63.69	61.53	62.02	64.06	65.44	65.36	65.82	65.97	66.52	66.62
15	65.18	64.39	63.69	61.39	62.08	64.13	65.48	65.36	65.84	65.96	66.54	66.69
16	65.07	64.37	63.56	61.33	62.20	64.23	65.43	65.36	65.87	66.04	66.47	66.72
17	65.03	64.34	63.41	61.33	62.33	64.28	65.61	65.35	65.90	66.15	66.46	66.66
18	64.96	64.52	63.40	61.37	62.44	64.28	65.41	65.33	65.92	66.16	66.39	66.64
19	64.96	64.37	63.20	61.44	62.45	64.30	65.45	65.29	65.95	66.16	66.30	66.62
20	65.10	64.20	63.01	61.44	62.45	64.35	65.47	65.37	65.84	66.18	66.43	66.70
21	65.16	64.15	62.90	61.42	62.52	64.41	65.46	65.36	65.89	66.20	66.59	66.58
22	65.07	64.12	62.96	61.35	62.62	64.44	65.46	65.48	65.96	66.25	66.58	66.66
23	65.07	64.04	63.00	61.23	62.69	64.49	65.50	65.49	66.00	66.27	66.47	66.64
24	64.90	64.01	62.93	61.25	62.73	64.51	65.56	65.49	66.00	66.27	66.41	66.65
25	64.81	63.98	62.73	61.37	62.78	64.56	65.55	65.58	65.98	66.30	66.43	66.73
26	64.81	63.98	62.70	61.41	62.88	64.62	65.52	65.68	65.98	66.29	66.45	66.82
27	64.68	64.15	62.46	61.42	62.96	64.70	65.52	65.67	65.99	66.26	66.44	66.84
28	64.65	64.18	62.06	61.46	63.01	64.86	65.51	65.65	65.91	66.27	66.43	66.80
29	64.68	64.07	62.11	61.49	63.01	64.90	65.50	65.60	65.87	66.29	66.34	66.75
30	64.60	---	62.36	61.49	63.03	64.91	65.45	65.63	65.91	66.28	66.34	66.72
31	64.76	---	62.45	---	63.10	---	65.40	65.63	---	66.30	---	66.67
MEAN	65.16	64.39	63.32	61.64	62.21	64.09	65.36	65.43	65.84	66.12	66.38	66.61

CAL YR 1984 MEAN 64.72 HIGH 61.23 LOW 66.84

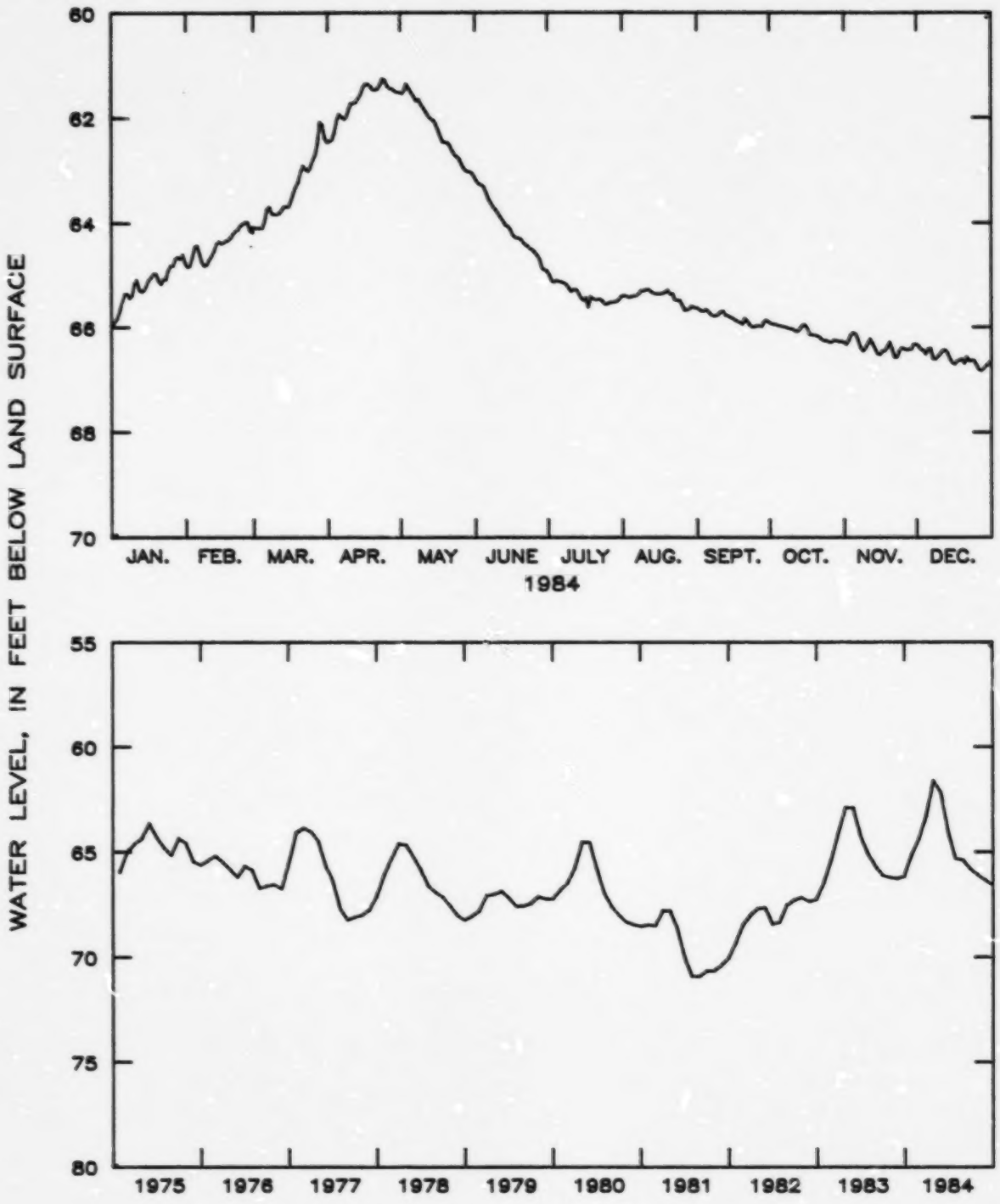

Figure 2.7.4.4–3.––Water level in observation well 27E002, Charlton County.

3.0 GROUND-WATER QUALITY

Water samples are collected periodically throughout Georgia and analyzed as part of areal and regional ground-water studies. Wells along the coast have been monitored for chloride concentration since the late fifties. Chloride is indicative of saltwater contamination and is readily analyzed in the field. Wells in the water-level monitoring networks also are pumped and sampled periodically to note any changes in water quality that may occur in the various aquifers of the State.

Where water-quality problems are noted, or are considered likely to occur, samples are collected more frequently and analyzed for water-quality constituents indicative of the problem. Stream also are sampled for water quality in those areas where the stream water recharges an aquifer. Withdrawals of ground water can induce water-quality problems that otherwise might not have occurred.

3.1 Savannah area

Ground-water pumpage, totalling about 70 Mgal/d in the Savannah area, has lowered the artesian water level in the Floridan aquifer system to about 120 feet below sea level in the cone of depression. Although this water-level decline is the apparent cause of an increase in chloride concentration in one well at nearby Hilton Head Island, S.C. (Clarke and others, 1984b), there has been no increase in the other wells sampled in the Savannah area during the past 20 years. Seven wells in the Savannah area are pumped and sampled periodically to monitor changes in chloride concentration in the area.

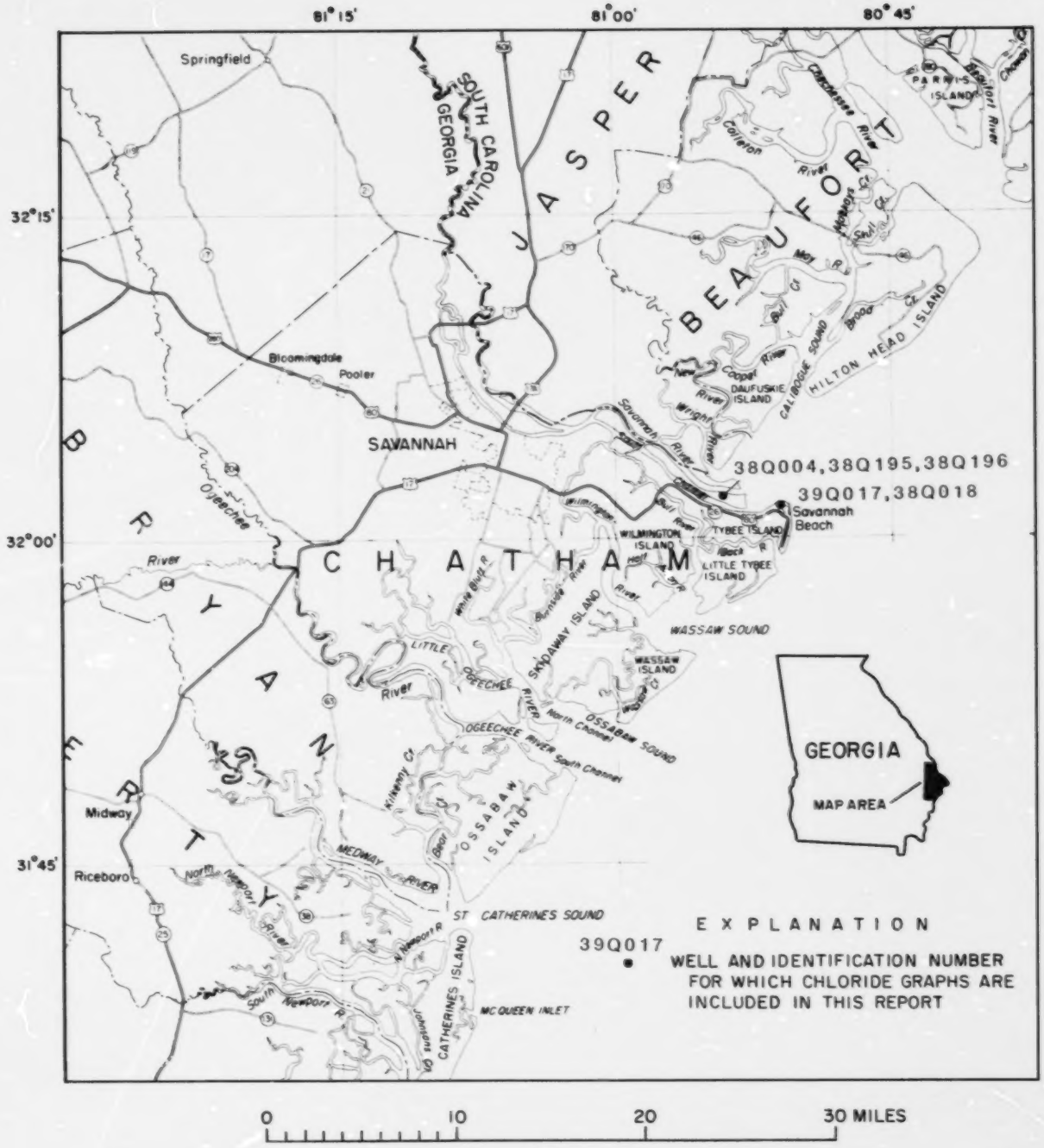

Figure 3.1-1.—Location of chloride-monitoring wells in the Savannah area.

Chloride concentrations in Chatham County generally remained stable during 1975-84. Chloride concentration generally increases with depth. Well 38Q004 (depth, 606-657 ft), well 39Q018 (depth, 630-670 ft), and well 39Q017 (depth, 710-745 ft) all have chloride concentrations of less than 900 mg/L. Well 38Q196 (depth, 870-925 ft) has a chloride concentration of about 5,200 mg/L. Well 38Q195 (depth, 1,230-1,363 ft) taps one of the deepest zones of the Floridan aquifer system in this area and has the highest chloride concentration of the wells sampled, about 13,000 mg/L. At the end of 1984, the chloride concentration at well 39Q018 decreased, whereas the concentration at well 39Q017 increased. More data are needed to assess the cause of these changes.

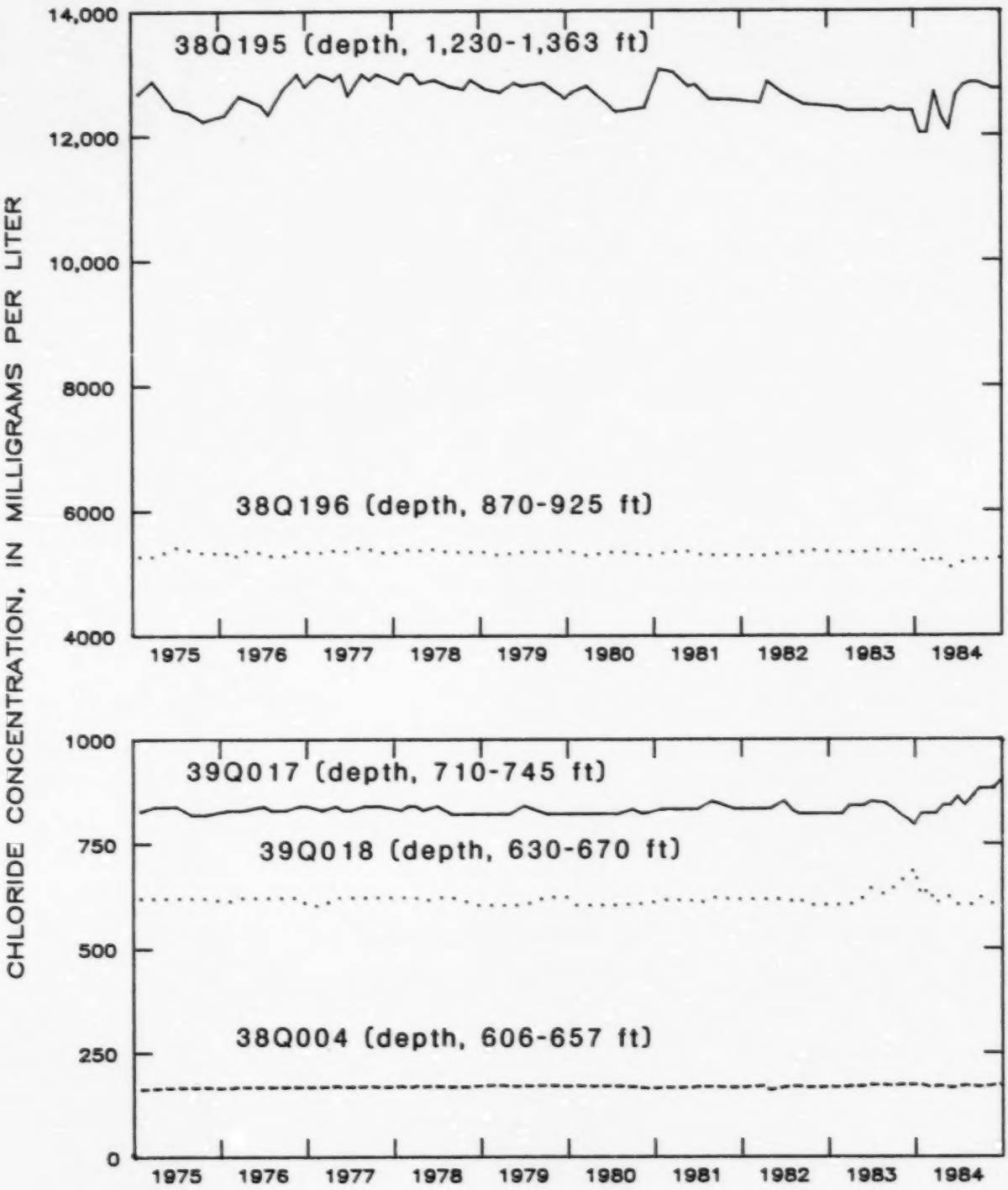

Figure 3.1—2.——Chloride concentrations in Chatham County.

3.2 Brunswick Area

In the Brunswick area, the Floridan aquifer system is divided into the Upper Floridan aquifer and the Lower Floridan aquifer. The Upper Floridan aquifer includes two fresh-water-bearing zones: the "upper water-bearing zone" and the "lower water-bearing zone" described by Wait and Gregg (1973, p. 16) and Gregg and Zimmerman (1974, p. D17 and pl. 1). The upper part of the Lower Floridan aquifer includes a zone of water that has a chloride concentration of about 6,000 mg/L, referred to as the "brackish-water zone" (Gregg and Zimmerman, 1974, pl. 1). The lower part of the Lower Floridan aquifer is called the Fernandina permeable zone (Krause and Randolph, 1985) and contains water that had a chloride concentration in 1978 of more than 20,000 mg/L (Gill and Mitchell, 1979).

Since pumping began in the late 1800's, ground-water withdrawal in the Brunswick area has lowered the artesian water level in the Floridan aquifer system by as much as 25 to 65 feet. This water-level decline has allowed saltwater to migrate upward in the aquifer system at three known locations in Brunswick and move downgradient toward the centers of pumping. Changes in chloride concentration may be attributed to shifting water-level gradients that change the direction of migration of the chloride plume. At two locations in Brunswick, the chloride concentration in the upper water-bearing zone has risen to more than 2,000 mg/L.

About 100 wells in Glynn County, mostly in the Brunswick area, are pumped and sampled periodically for chloride analysis.

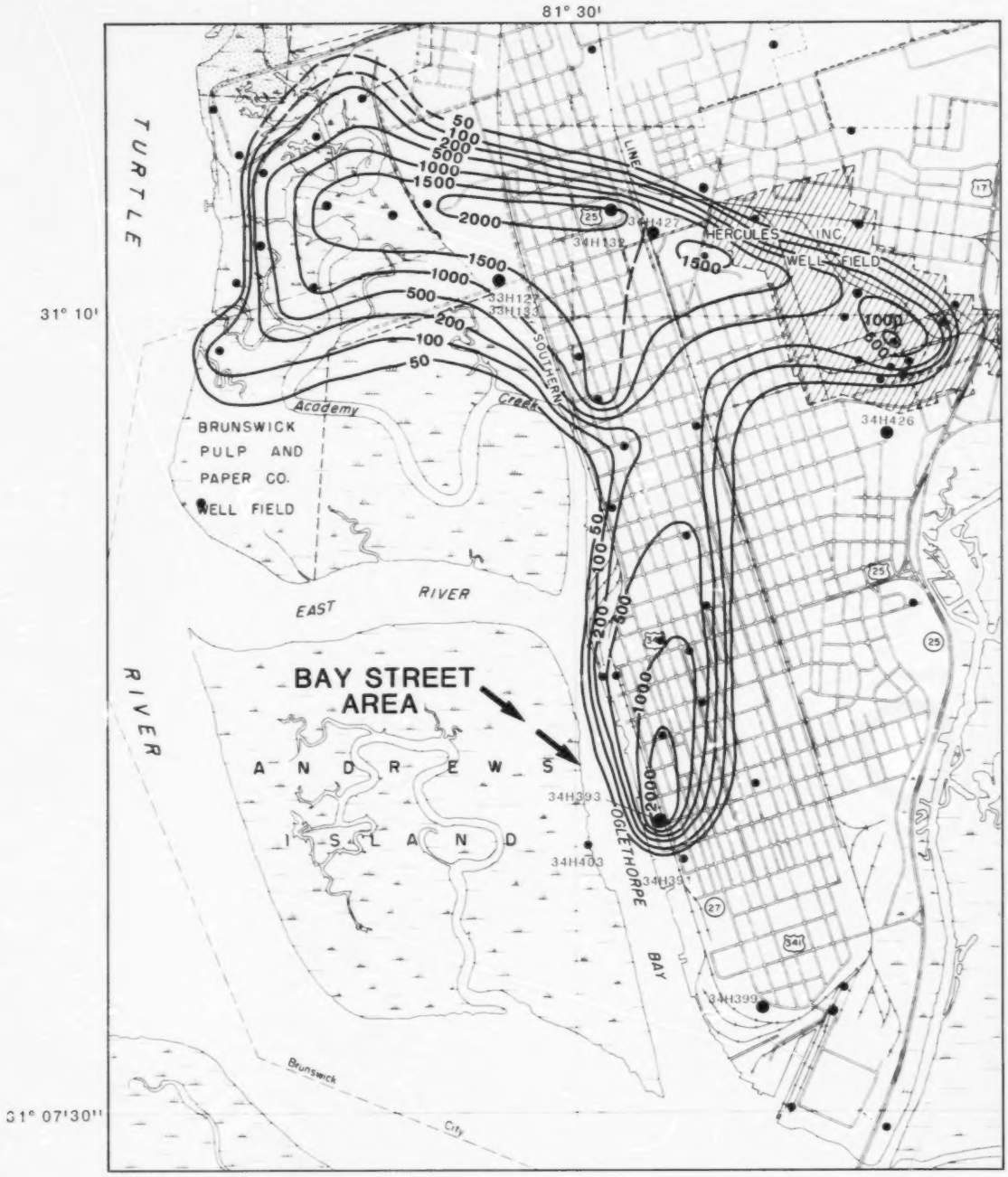

Figure 3.2-1.—Locations of the chloride-monitoring wells and chloride concentrations in the upper water-bearing zone in the Brunswick area, October-November 1984.

Chloride concentrations in the Bay Street area respond to local pumping. Well 34H399, which taps the brackish-water zone, showed an increase in chloride concentration from 1969 to 1982. This increase indicates that saltwater is invading the zone from a deeper source in the cavernous limestone (Harold E. Gill, U.S. Geological Survey, oral commun., 1979; Gregg and Zimmerman, 1974). The chloride concentration at well 34H399 in April 1984 was 6,300 mg/L, a decrease of about 550 mg/L since 1982 in response to a reduction in pumping. By October 1984, the chloride concentration in well 34H399 rose to 6,600 mg/L. Well 34H391 also taps the brackish-water zone. For the first half of 1982, this well had a chloride concentration of about 2,700 mg/L. With the reduction in pumpage of about 20 Mgal/d in 1982, the chloride concentration decreased to about 2,350 mg/L. This decrease continued into 1984 and by the end of the year the chloride concentration was 2,200 mg/L.

Well 34H393 taps the upper water-bearing zone in the Bay Street area. The chloride concentration in this well has remained steady since 1975 and was about 2,300 mg/L at the end of 1984. Well 34H403 taps the lower water-bearing zone and yields water containing about 1,500 mg/L chloride. The chloride concentrations in both wells have remained fairly stable for the last few years.

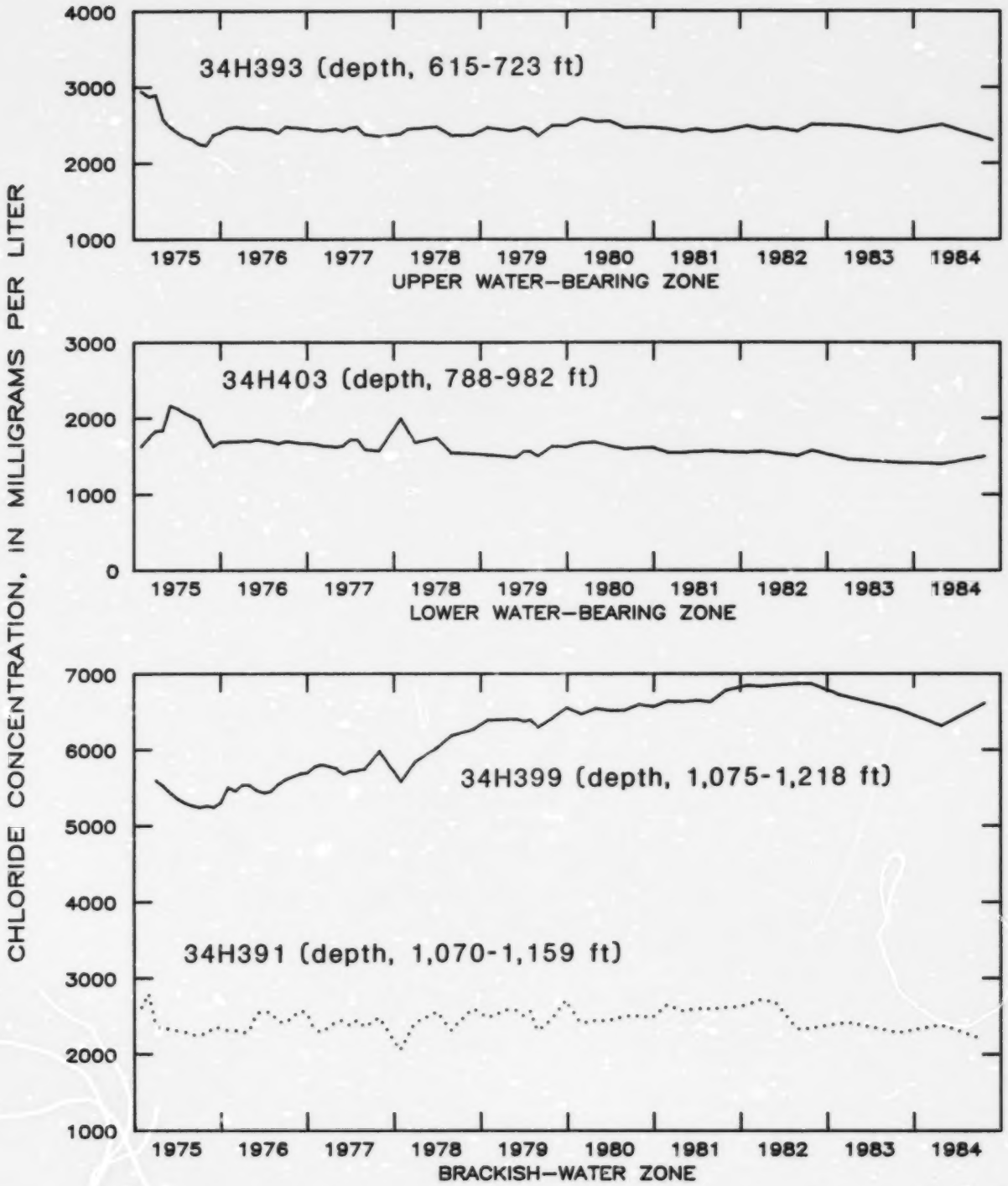

Figure 3.2–2.––Chloride concentrations in the Bay Street area of Brunswick.

During 1984, chloride concentrations in the upper water-bearing zone in the north Brunswick area remained steady at well 33H133 and decreased at wells 34H427 and 34H132. The chloride concentrations at wells 34H132 and 33H133 showed a steady increase during 1975-82, but showed little change during 1983. In 1984, the concentration at well 33H133 remained stable whereas the concentration at well 34H132 showed a slight decrease. The chloride concentration at well 34H427 decreased during 1982, leveled off during 1983, and showed a sharp decrease in 1984. By October 1984, the concentration at the well was about 1,350 mg/L.

Well 33H127 taps the lower water-bearing zone. With the reduction in pumping in July 1982, the chloride concentration in this well began to fluctuate. During 1983-84, however, the chloride concentration remained steady. Well 34H426 taps the brackish-water zone. The chloride concentration in this well had been fairly stable since 1978, but rose dramatically in late summer of 1982. During 1983, the chloride concentration remained stable. In 1984, the chloride concentration began to fluctuate and was about 800 mg/L at the end of the year. The decrease in nearby pumping during 1982 may have changed the principal direction of ground-water movement in the aquifer system and thus affected the chloride concentration. More data are needed to assess the implications of the 1982 rise and the 1984 fluctuations in chloride concentration.

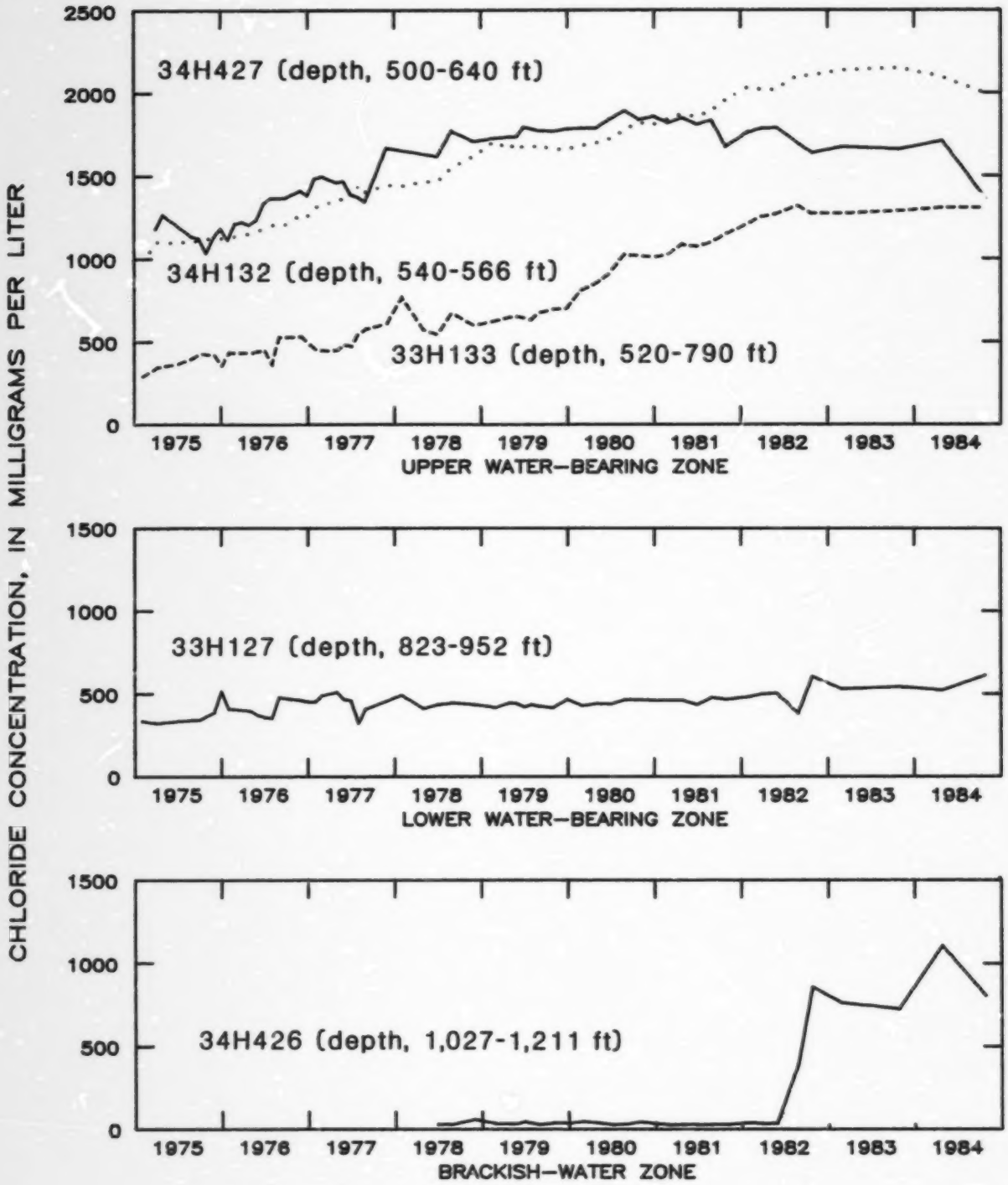

Figure 3.2-3.--Chloride concentrations in the north Brunswick area.

4.0 SELECTED REFERENCES

Brooks, Rebekah, Clarke, J. S., and Faye, R. E., 1985, Hydrogeology of the Gordon aquifer system of east-central Georgia: Georgia Geologic Survey Information Circular 75.

Callahan, J. T., 1964. The yield of sedimentary aquifers of the Coastal Plain, Southeast River Basins: U.S. Geological Survey Water-Supply Paper 1669-W, 56 p.

Clarke, J. S., Brooks, Rebekah, and Faye, R. E., 1985, Hydrogeology of the Dublin and Midville aquifer systems of east-central Georgia: Georgia Geologic Survey Information Circular 74.

Clarke, J. S., Faye, R. E., and Brooks, Rebekah, 1983, Hydrogeology of the Providence aquifer of southwest Georgia: Georgia Geologic Survey Hydrologic Atlas 11, 5 sheets.

_____1984a, Hydrogeology of the Clayton aquifer of southwest Georgia: Georgia Geologic Survey Hydrologic Atlas 13, 6 sheets.

Clarke, J. S., Hester, W. G., and O'Byrne, M. P., 1979, Ground-water levels and quality data for Georgia, 1978: U.S. Geological Survey Open-File Report 79-1290, 94 p.

Clarke, J. S., Peck, M. F., Longsworth, S. A., and McFadden, K. W., 1984b, Ground-Water Data for Georgia, 1983: U.S. Geological Survey Open-File Report 84-605, 145 p.

Clarke, J. S., and Pierce, R. R., 1984, Ground-Water Resources of Georgia: Georgia Operator, v. 21, no. 4, p. 10-39.

Counts, H. B., and Donsky, Ellis, 1963, Salt-water encroachment, geology, and ground-water resources of Savannah area, Georgia and South Carolina: U.S. Geological Survey Water-Supply Paper 1611, 100 p.

Cressler, C. W., Thurmond, C. J., and Hester, W. G., 1983, Ground water in the Greater Atlanta Region, Georgia: Georgia Geologic Survey Information Circular 63, 144 p.

Cressler, C. W., Franklin, M. A., and Hester, W. G., 1976, Availability of water supplies in northwest Georgia: Georgia Geological Survey Bulletin 91, 140 p.

Gill, H. E., Mitchell, G. D., and Bisdorf, Robert, 1978, Saltwater encroachment in a carbonate aquifer system at Brunswick, Georgia. [abs., Southeastern Section of the Geological Society of America, 28th annual meeting] Abstracts with programs, 1979, v. 11, no. 4, p. 180.

Gill, H. E., Mitchell, G. D., 1979, Results of Colonels Island deep hydrologic test well, in Investigations of alternative sources of ground water in the coastal area of Georgia: Georgia Geologic Survey Open-File Report 80-3, p. C1-C13.

Gregg, D. O., and Zimmerman, E. A., 1974, Geologic and hydrologic control of chloride contamination in aquifers in Brunswick, Glynn County, Georgia: U.S. Geological Survey Water-Supply Paper 2029-D, 44 p.

Hicks, D. W., Krause, R. E., and Clarke, J. S., 1981, Geohydrology of the Albany area, Georgia: Georgia Geologic Survey Information Circular 57, 31 p.

Johnston, R. H., Healy, H. G., and Hayes, L. R., 1981, Potentiometric surface of the Tertiary limestone aquifer system, Southeastern United States, May 1980: U.S. Geological Survey Open-File Report 81-486, 1 sheet.

Krause, R. E., 1972, Effects of ground-water pumping in parts of Liberty and McIntosh Counties, Georgia, 1966-70: Georgia Geological Survey Information Circular 45, 15 p.

Krause, R. E., 1976, Occurrence and distribution of color and hydrogen sulfide in water from the principal artesian aquifer in the Valdosta area, Georgia: U.S. Geological Survey Open-File Report 76-378, 11 p.

_____1979, Geohydrology of Brooks, Lowndes, and western Echols Counties, Georgia: U.S. Geological Survey Water-Resources Investigations 78-117, 48 p.

_____1982, Digital model evaluation of the predevelopment flow system of the Tertiary limestone aquifer, southeast Georgia, northeast Florida, and southern South Carolina: U.S. Geological Survey Water-Resources Investigations 82-173, 27 p.

Krause, R. E., and Counts, H. B., 1975, Digital model analysis of the principal artesian aquifer, Glynn County, Georgia: U.S. Geological Survey Water-Resources Investigations 1-75, 4 sheets.

Krause, R. E., and Gregg, D. O., 1972, Water from the principal artesian aquifer in coastal Georgia: Georgia Geological Survey Hydrologic Atlas 1, 4 sheets.

Krause, R. E., and Hayes, L. R., 1981, Potentiometric surface of the principal artesian aquifer in Georgia, May 1980: Georgia Geologic Survey Hydrologic Atlas 6, 1 sheet.

Krause, R. E., Matthews, S. E., and Gill, H. E., 1984, Evaluation of the ground-water resources of coastal Georgia--Preliminary report on the data available as of July 1983: Georgia Geologic Survey Information Circular 62, 55 p.

Krause, R. E., and Randolph, R. B., 1985, Hydrology of the Floridan aquifer system in southeast Georgia and adjacent parts of Florida and South Carolina: U.S. Geological Survey Professional Paper 1403-D. [in press].

McCollum, M. J., 1966, Ground-water resources and geology of Rockdale County, Georgia: Georgia Geological Survey Information Circular 33, 17 p.

McFadden, S. S., and Perriello, P. D., 1983, Hydrogeology of the Clayton and Claiborne aquifers in southwestern Georgia: Georgia Geologic Survey Information Circular 55, 59 p.

Matthews, S. E., Hester, W. G., and McFadden, K. W., 1982, Ground-water data for Georgia, 1981: U.S. Geological Survey Open-File Report 82-904, 110 p.

Matthews, S. E., Hester, W. G., and O'Byrne, M. P., 1980, Ground-water data for Georgia, 1979: U.S. Geological Survey Open-File Report 80-501, 93 p.

_____1981, Ground-water data for Georgia, 1980: U.S. Geological Survey Open-File Report 81-1068, 94 p.

Miller, J. A., 1985, Hydrogeologic framework of the Floridan aquifer system in Florida and in parts of Georgia, South Carolina, and Alabama: U.S. Geological Survey Professional Paper 1403-B, 91 p.

Mitchell, G. D., 1980, Potentiometric surface of the principal artesian aquifer in Georgia, November 1979: Georgia Geologic Survey Hydrologic Atlas 4.

Pierce, R. R., and Barber, N. L., 1982, Water use in Georgia, 1980--Summary: Georgia Geologic Survey Circular 4-A, 17 p.

Pierce, R. R., Barber, N. L., and Stiles, H. R., 1982, Water use in Georgia by county for 1980: Georgia Geologic Survey Information Circular 59, 180 p.

Pollard, L. D., Grantham, R. G., and Blanchard, H. E., Jr., 1978, A preliminary appraisal of the impact of agriculture on ground-water availability in southwest Georgia: U.S. Geological Survey Water-Resources Investigations 79-7, 22 p.

Pollard, L. D., and Vorhis, R. C., 1979, Geohydrology of the Cretaceous aquifer system in Georgia: Georgia Geologic Survey Hydrologic Atlas 3, 5 sheets.

Sever, C. W., 1964, Geology and ground-water resources of crystalline rocks, Dawson County, Georgia: Georgia Geological Survey Information Circular 30, 32 p.

Stiles, H. R., and Matthews, S. E., 1983, Ground-water data for Georgia, 1982: U.S. Geological Survey Open-File Report 83-678, 147 p.

Stringfield, V. T., 1966, Artesian water in Tertiary limestone in the Southeastern States: U.S. Geological Survey Professional Paper 517, 226 p.

Thomson, M. T., Herrick, S. M., Brown, Eugene, and others, 1956, Availability and use of water in Georgia: Georgia Geological Survey Bulletin 65, 329 p.

U.S. Geological Survey, 1978, Ground-water levels and quality data for Georgia, 1977: U.S. Geological Survey Open-File Report 79-123, 88 p.

Wait, R. L., 1963, Geology and ground-water resources of Dougherty County Georgia: U.S. Geological Survey Water-Supply Paper 1539-P, 102 p.

_____1965, Geology and occurrence of fresh and brackish ground water in Glynn County, Georgia: U.S. Geological Survey Water-Supply Paper 1613-E, 89 p.

Wait, R. L., and Gregg, D. O., 1973, Hydrology and chloride contamination of the principal artesian aquifer in Glynn County, Georgia: Georgia Geological Survey Hydrologic Report 1, 93 p.

*U.S. GOVERNMENT PRINTING OFFICE: 1985-549-152